

**ANTECEDENTS OF EMPLOYEE PRO-ENVIRONMENTAL BEHAVIOUR IN
HOSPITALITY FIRMS IN THE CAPRICORN AND WATERBERG DISTRICT
MUNICIPALITIES, LIMPOPO PROVINCE**

by

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DECLARATION

I, Dimakatjo Mmaratha Dorcus Mamabolo, declare that “**Antecedents of employee pro-environmental behaviour in hospitality firms in the Capricorn and Waterberg District municipalities, Limpopo Province**” is my own work and that all the sources that I have used or referenced have been established and accepted by means of full references. This work has not been forwarded to any other organisation for any further degree or whatsoever.

Signature.....



Date 20 June 2024

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This research study would not have been accomplished without the invaluable contributions and support of various individuals throughout its entirety.

Firstly, I would like to express my gratitude to my Creator, for giving me the strength and wisdom to conduct this research study.

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ABSTRACT

This study explored the factors leading to pro-environmental behaviour among the employees of small hotels in the Capricorn and Waterberg district municipalities of the Limpopo Province. The objectives of this study were: to investigate the relationship between values (altruistic values, Biospheric values, and egoistic values) and the new ecological paradigm; to determine the relationship between the new ecological paradigm and awareness of consequences; to examine the relationship between an awareness of consequences and an ascription of responsibility; to determine the relationship between an ascription of responsibility and personal norms; to examine the relationship between personal norms and employee pro-environmental behaviour; to determine if anticipated pride moderates the relationship between personal norms and employee pro-environmental behaviour; to investigate if personal norms, mediate the relationship between social norms and pro-environmental behaviour. Empirical evidence shows that individuals who prioritise altruistic values and biospheric values are more likely to hold pro-environmental beliefs and engage in behaviours that support sustainability and conservation. The study revealed that there is a significant relationship between values (altruistic values, egoistic values, and biospheric values) and performance and these findings are consistent with a number of studies conducted previously. The results uncovered that, altruistic values positively and significantly affect NEP. The study consistently demonstrated a positive correlation between the NEP and awareness of consequences. Empirical evidence highlights that individuals who hold a NEP are more likely to demonstrate increased awareness of environmental consequences and to engage in pro-environmental behaviour. This suggests that the NEP serves as an essential factor in shaping individuals' attitudes towards the environment along with the awareness of the impact their behaviour has on the ecosystem. Empirical evidence found that individuals who exhibit greater awareness of environmental consequences and ascribe greater responsibility to themselves for their actions are more likely to engage in sustainability behaviours. This implies that individuals who understand the impact of their actions on the environment and take responsibility are more likely to make pro-environmental choices. The findings emphasise the importance of fostering a sense of responsibility and understanding the interdependence between individuals and the environment to

create a culture of sustainability. Overall, the relationship between social norms and pro-environmental behaviour is mediated by personal norms, which are specifically the best predictor of pro-environmental behaviour. The study recommends that regular workshops for SMME hotel staff from all divisions of the company must be organised to educate them on the value of preserving and protecting the environment. Green practice should also be included as a course in entrepreneurial programmes at higher education institutions so that these employees can take them as their subjects or modules, preparing them to protect the environment when running their day-to-day operations. Employees at SMMEs need to be aware of the influence of organisational factors on green practice to gain a competitive advantage. They need to be fully aware of how organisational variables affect green practices and how crucial they are to improving the efficiency of SMME hotels. SMME hotel management must regularly educate themselves and every employee on green practices. To gain a competitive advantage, they must also increase their level of knowledge about green practices and acquire new skills to function more effectively. Additionally, SMME hotel managers must be able to educate both current employees and new hires on how organisational issues might influence green practices.

Keywords: Antecedents, Employee, Pro-Environmental behaviour (PEB), Hospitality Firms, Capricorn and Waterberg District Municipalities, Limpopo Province

TABLE OF CONTENTS

TABLE OF CONTENTS

DECLARATION	ii
ACKNOWLEDGEMENTS.....	iii
ABSTRACT	iv
CHAPTER ONE	1
INTRODUCTION AND BACKGROUND OF THE STUDY.....	1
1.1. INTRODUCTION AND BACKROUND OF THE STUDY.....	1
1.2. PROBLEM STATEMENT.....	3
1.3. THE AIM OF THE STUDY	4
1.4. OBJECTIVES OF THE STUDY	4
1.5. HYPOTHESES.....	5
1.6. DEFINITION OF CONCEPTS	5
1.7. LITERATURE REVIEW	9
1.7.1. Theoretical framework.....	9
1.10. SIGNIFICANCE OF THE STUDY	10
1.11. CHAPTER OUTLINE	11
CHAPTER TWO.....	13
TOURISM AND HOSPITALITY	13
2.1. INTRODUCTION.....	13
2.4. TOURISM AND HOSPITALITY	13

2.4.1. Definition of tourism	13
2.4.2. Types of tourism	15
2.4.2.1. <i>Outbound Tourism</i>	15
2.4.2.2. <i>International Tourism</i>	15
2.4.2.3. <i>Domestic Tourism.....</i>	15
2.4.2.4. <i>Culinary Tourism.....</i>	16
2.4.2.5. <i>Business Tourism</i>	16
2.4.2.6. <i>Medical Tourism</i>	16
2.4.2.7. <i>Hospitality in Tourism.....</i>	16
2.4.2.8. <i>International and local definitions of hospitality.....</i>	17
2.5. CONTRIBUTIONS OF TOURISM AND HOSPITALITY.....	19
2.5.1. Contribution of tourism to the South African GDP	19
2.5.2. Contributions of tourism to the developed countries.....	20
2.5.2.1 <i>Contributions of tourism in USA.....</i>	20
2.5.2.2. <i>Contributions of tourism in France</i>	21
2.5.2.4. <i>Contributions of tourism in United Kingdom (UK)</i>	22
2.5.3. Contributions of tourism to the developing countries	23
2.5.3.1. <i>Contributions of tourism in Nigeria.....</i>	23
2.5.3.2. <i>Contributions of tourism in Kenya.....</i>	24
2.5.3. Contributions of hospitality firms.....	25
2.5.2.1. <i>Employment generation.....</i>	25
2.5.2.2. <i>Foreign exchange earnings</i>	26
2.5.2.3. <i>Multiplier effect.....</i>	26
2.5.2.4. <i>Social development</i>	27
2.5.2.5. <i>Infrastructure development</i>	28
2.5.2.6. <i>Skills development.....</i>	29
2.5.2.7. <i>Contributions to economic growth.....</i>	30

2.6. CHALLENGES FACING TOURISM AND HOSPITALITY	30
2.6.1. Local challenges facing tourism and hospitality	30
2.6.1.1. <i>Labor and Skills Shortage</i>	30
2.6.1.2. <i>Access to Capital</i>	31
2.6.1.3. <i>Increasing Construction Costs</i>	32
2.6.1.4. <i>Pricing Pressures</i>	33
2.6.1.5. <i>Infrastructure</i>	34
2.6.2. International challenges facing tourism and hospitality	35
2.6.2.1. <i>Global Uncertainties</i>	35
2.6.2.2. <i>Over-tourism</i>	36
2.6.2.3. <i>Environmental Sustainability</i>	37
2.6.2.4. <i>Regulatory and Compliance Challenges</i>	38
2.6.2.5. <i>Shifting Consumer Behaviour</i>	39
2.6.3. Environmental challenges facing tourism and hospitality	39
2.6.3.1. <i>Pollution</i>	39
2.6.3.2. <i>Depletion of natural resources and waste problems</i>	41
2.6.3.3. <i>Energy consumption</i>	42
2.6.3.4. <i>Environmental degradation due to tourism development and growth ...</i>	43
2.7. CHAPTER SUMMARY	44
CHAPTER THREE.....	45
THEORETICAL AND EMPIRICAL LITERATURE ON ANTECEDENTS OF EMPLOYEE PRO-ENVIRONMENTAL BEHAVIOUR.....	45
3.1 INTRODUCTION.....	45
3.2. PRO-ENVIRONMENTAL BEHAVIOUR.....	45
3.3. TYPES OF PRO-ENVIRONMENTAL BEHAVIOUR	47

3.3.1. Voluntary pro-environmental behaviour	47
3.3.2. Factors influencing voluntary pro–environmental behaviour.....	47
3.3.2.1. <i>Attitudes</i>	47
3.3.2.2. <i>Norms.....</i>	48
3.3.2.3. <i>Perceived Behaviour Control.....</i>	49
3.3.2.4. <i>Habits</i>	49
3.3.2.5. <i>Values</i>	50
3.3.2.6. <i>Beliefs</i>	51
3.3.3. Factors that determine VPEB in the workplace.....	52
3.3.3.1. <i>Norm-activation.....</i>	52
3.3.3.2. <i>Environmental commitment</i>	53
3.3.3.3. <i>Environmental consciousness</i>	54
3.3.3.4. <i>Green lifestyle.....</i>	55
3.3.3.5. <i>Green self-efficacy.....</i>	55
3.3.4. <i>Involuntary pro-environmental behaviour.....</i>	56
3.3.5. Factors influencing involuntary pro–environmental behaviour	56
2.3.5.1. <i>Policies and regulations.....</i>	56
3.3.5.2. <i>Social norms</i>	57
2.3.5.3. <i>External incentives.....</i>	58
2.3.6. Factors that determine IPEB in the workplace	58
2.3.6.1. <i>Organisational culture</i>	58
2.3.6.2. <i>Psychological and social support.....</i>	59
2.3.6.3. <i>Policy and regulations.....</i>	60
2.3.6.4. <i>Social norms</i>	61
2.3.6.5. <i>External incentives.....</i>	62
2.3.6.6. <i>Workload and physical activity.....</i>	64
2.3.6.7. <i>Essential job functions</i>	65

2.3.7. The difference between VPEB and IPEB.....	66
2.3.7.1. <i>Volition</i>	66
2.3.7.2. <i>Motivation</i>	66
2.3.7.3. <i>Measurement</i>	67
3.2 THEORETICAL LITERATURE REVIEW.....	68
3.2.1. Theory of Reasoned Action	68
3.2.2. Theory of Planned Behaviour	69
3.2.2.1. <i>Attitudes</i>	70
3.2.2.2. <i>Subjective norms</i>	70
3.2.2.3. <i>Perceived behavioural control</i>	71
3.2.2.4. <i>Intention</i>	71
3.2.2.5. <i>Behaviour</i>	72
3.2.3. Studies that have used the TPB	73
3.2.4. Limitations of the Theory of Planned Behaviour (TPB)	74
3.2.4.1. <i>Limited scope</i>	74
3.2.4.2. <i>Assumption of rationality</i>	75
3.2.4.3. <i>Lack of consideration of moral norms</i>	75
3.2.5. Norm activation theory	76
3.2.5.1 <i>Aspects of NAT</i>	76
3.2.5.2 <i>Merging TPB with NAT</i>	78
3.2.6. Studies that have used NAT.....	78
3.2.7. Limitations of the Norm Activation Theory (NAT)	79
3.2.8. Value belief norm theory	80
3.2.9. Values	81
3.2.10. Component of values.....	81
3.2.11. The New Environmental (or Ecological) Paradigm (NEP).....	82
3.2.13. Awareness of consequences (AC)	83

3.2.14. Components of AC.....	84
3.2.14.1. <i>Beliefs about the consequences of one's actions</i>	84
3.2.14.2. <i>Perceived responsibility</i>	84
3.2.14.3. <i>Moral obligation</i>	84
3.2.14.4. <i>Personal norms</i>	85
3.2.15. Ascription of responsibility (AR) to self-beliefs	85
3.2.16. Components of Ascription of Responsibility	85
3.2.16.1. Beliefs about responsibility	86
3.2.16.2. <i>Moral obligation</i>	86
3.2.16.3. <i>Personal norms</i>	86
3.2.16.4. <i>Ascription of responsibility to self-beliefs</i>	86
3.2.15. Personal norms (PN).....	86
3.2.16. The components of personal norms	87
3.2.16.1. <i>Moral obligation</i>	87
3.2.16.2. <i>Values</i>	87
3.2.16.3. <i>Beliefs</i>	87
3.2.16.4. <i>Self-identity</i>	87
3.2.17. Studies that have used the VBN in the context of pro-environmental behaviour.....	87
3.2.18. Reason for the extensions of the VBN by other studies	88
3.2.19. Reason for the extensions of the VBN by this study	89
3.3. EMPIRICAL LITERATURE REVIEW	89
3.3.1. Altruistic values and new ecological paradigm	89
3.3.2. Biospheric values and new ecological paradigm	91
3.3.4. Egoistic values and new ecological paradigm	91
3.3.5. New ecological paradigm and awareness of consequences	92
3.3.6. Awareness of consequences and ascription of responsibility	93

3.3.7. Ascription of responsibility and personal norm	94
3.3.8. Personal norm and employee pro-environmental behaviour.....	94
3.3.9. Anticipated pride moderates personal norm and employee pro-environmental behaviour	95
3.3.10. Personal norm mediates social norms and pro-environmental behaviour.....	96
3.4. SUMMARY	99
CHAPTER FOUR.....	100
RESEARCH METHODOLOGY	100
4.1 INTRODUCTION.....	100
4.2 RESEARCH DEFINITION	100
4.3. RESEARCH OBJECTIVES	101
4.4. RESEARCH HYPOTHESES.....	102
4.4.1. Primary hypotheses.....	102
4.4.2. Secondary hypotheses (moderating effect of anticipated pride).....	103
4.4.3. Secondary hypotheses (mediating effect of personal norm).....	103
4.5 RESEARCH PHILOSOPHY AND APPROACH.....	103
4.5.1 Research Philosophy.....	103
4.5.2 Research Approach	104
4.6 RESEARCH DESIGN	104
4.6.1 Types of research designs.....	105
4.6.1.1 Qualitative research.....	105
4.6.1.2 Quantitative research.....	105
4.6.1.3 Mixed methods	106

4.7. RESEARCH AREA	107
4.8. POPULATION AND SAMPLING	107
4.8.1. Population	107
4.8.2. Sampling	108
<i>4.8.2.1. Probability sampling.....</i>	<i>108</i>
<i>5.8.2.2 Non-Probability sampling.....</i>	<i>109</i>
4.8.3. Sampling Size.....	110
4.9 DATA COLLECTION	111
4.9.1 Observation	111
4.7.2 Experiment	112
4.7.3 Survey	112
<i>4.7.3.1 Various methods of conducting surveys</i>	<i>113</i>
4.8 SECONDARY DATA COLLECTION METHODS	116
4.9 QUESTIONNAIRE DESIGN AND CONTENT	116
4.9.1 Questionnaire.....	116
<i>4.9.2. Survey Questions</i>	<i>116</i>
4.10 PILOT STUDY (PRE-TESTING)	117
4.10. DATA ANALYSIS	118
4.9.1 Descriptive analysis.....	118
4.9.2 Structural equation modelling (SEM)	118
4.9.3. Types of SEM	119
4.9.3. PLS SEM	121
4.9.4. Requirement of the PLS SEM.....	121
4.9.5. Measurement model evaluation.....	121

4.9. RELIABILITY AND VALIDITY	124
4.10.1 Reliability	124
4.10.2 Validity	125
4.10.2.1 Content validity	125
4.10.2.2 Criterion validity.....	126
4.10.2.3 Construct validity.....	126
4.10.2.4. Statistical validity.....	127
4.11. ETHICAL CONSIDERATIONS	128
4.12. SUMMARY.....	130
CHAPTER FIVE.....	131
DATA ANALYSIS AND INTERPRETATION OF RESULTS	131
5.1. INTRODUCTION.....	131
5.2. NORMALITY OF DATA	131
5.3. RESPONSE RATE.....	133
5.3. DEMOGRAPHIC INFORMATION.....	134
5.3.1. Gender	134
5.3.2. Age	135
5.3.3. Level of education.....	136
5.3.4 Number of years working in the firm.....	138
5.3.5 Number of employees.....	139
5.3.6. Position.....	140
5.4 DESCRIPTIVE STATISTICS	141
5.5 PLS SEM	142
5.6.1 Measurement model evaluation.....	142

5.5.1.1 Assessing the reflective measurement model.....	143
5.5.1.2 Evaluation of formative assessment	149
5.5.2 Structural model evaluation	151
5.6.2.1 R square (R^2)	151
5.5.2.2 Effect size (f^2).....	152
5.6.2.4 Model fit	153
5.6.2.5. Path Coefficients and T-Statistics	153
5.7 MEDIATION ANALYSIS	155
5.12 MODERATION RESULTS	156
5.7. RESEARCH HYPOTHESES	157
5.7 SUMMARY.....	159
CHAPTER SIX	160
CONCLUSIONS, AND RECOMMENDATIONS.....	160
6.1 INTRODUCTION.....	160
6.3. HYPOTHESES.....	161
6.4 CONCLUSIONS.....	161
6.4.1 Conclusions on demographic characteristics	161
6.4.2 Conclusion on the relationship between values (altruistic, egoistic and biospheric values) and the new ecological paradigm)	162
6.4.3 Conclusion on the relationship between new ecological paradigm and awareness of consequences	164
6.4.4 Conclusion on the relationship between awareness of consequences and ascription of responsibility.....	164
6.4.5 Conclusion on the relationship between personal norm and employee pro-environmental behaviour	165

6.4.6 Conclusion of the relationship between personal norm and employee pro- environmental behaviour when anticipated pride is a moderator	165
6.4.7 Conclusion of the relationship between social norms and employee pro environmental behaviour when personal norm is a mediator	165
6. 5. RECOMMENDATIONS	166
6.5.1 Recommendations for SMME owners/managers	166
6.5.1.1 <i>Recommendations for altruistic values and new ecological paradigm .</i>	166
6.5.1.2 <i>Recommendations for egoistic values and ecological paradigm.....</i>	166
6.5.1.3 <i>Recommendations for biospheric values and new ecological paradigm</i>	166
6.5.1.4 <i>Recommendations for new ecological paradigm and awareness of consequences.....</i>	167
6.5.1.5 <i>Recommendations for awareness of consequences and ascription of responsibility.....</i>	167
6.5.1.6 <i>Recommendations for ascription of responsibility and personal norm .</i>	167
6.5.1.7 <i>Recommendations for personal norm and employee pro-environmental behaviour.....</i>	168
6.5.1.7 <i>Recommendations for personal norm and employee pro-environmental behaviour when anticipated pride is the moderator</i>	168
6.5.1.8 <i>Recommendations for social norms and employee pro-environmental behaviour when personal norm is the mediator.</i>	169
6.6. STUDY LIMITATIONS	169
6.7. SUGGESTIONS FOR FURTHER RESEARCH	170
6.8. SUMMARY.....	170
REFERENCES.....	172
ANEXTURE 1: ENGLISH QUESTIONNAIRE.....	223

ANNEXURE 1: SEPEDI POTŠIŠONYAKIŠIŠO	231
ANNEXURE 2: CONSENT FORM.....	240
ANNEXURE 3: EDITORIAL LETTER.....	242
ANNEXURE 4: SIMILARITY RESULTS.....	244

LIST OF TABLES

Table 5.1: Normality analysis	132
Table 5.2 Response Rate	133
Table 5.3 Gender of the respondents	134
Table 5.4 Age of the Respondents.....	135
Table 5. 5: Respondent's level of education	136
Table 5. 6: Respondent's number of years working in the firm.	138
Table 5. 7: Number of employees	139
Table 5. 8: The job title of the individual being surveyed.	140
Table 5. 9: Descriptive statistics	141
Table 5. 10: Factor loadings	143
Table 5. 11: Reliability	145
Table 5. 12: Average Variance Extracted AVE	146
Table 5.13: Fornell-Larker criteria for discriminant validity	147
Table 5.14: Heterotrait-Monotrait Ratio (HTMT)	148
Table 5. 15: Collinearity statistics.....	149
Table 5.16: R square (R^2)	151
Table 5. 17: Effect size (f^2)	152
Table 5. 18: Q square (Q^2).....	153
Table 5.19: Model fit.....	153
Table 5.20: Path coefficient and T-statistics.....	154
Table 5.15: Path coefficient and T-statistics.....	155
Table 5.18: Mediation results	156
Table 5.19: Moderation analysis	157
Table 5.20: Research Hypotheses	157

LIST OF FIGURES

Figure 3.1: Theory of Planned Behaviour	75
Figure 3.2: Norm Activation Theory.....	80
Figure 3.3: Value belief norm theory	81
Figure 3.4: Conceptual framework.....	98
Figure 5.1: Gender of the respondents	135
Figure 5.2: Age of the respondent	136
Figure 5.3: Respondent's level of education	137
Figure 5.4: Respondent's number of years working in the firm.....	138
Figure 5.5: Number of employees.....	..Error! Bookmark not defined.

CHAPTER ONE

INTRODUCTION AND BACKGROUND OF THE STUDY

1.1. INTRODUCTION AND BACKGROUND OF THE STUDY

Global warming and climate change are among the biggest challenges that the world currently faces (Mabibibi, 2023; Banunle, 2024). There is a rise in temperature because of an increasing concretion of greenhouse gases in the atmosphere and this has led to changes in climate over a long period of time (Yan, Keh & Murray, 2024). The negative effects of global warming and climate change include deforestation, air and water pollution and loss of biodiversity (Khizar, Younas, Kumar, Akbar & Poulouva, 2023). Numerous countries, including South Africa, have enacted many environmental legislations to protect the environment (Ahmed, Paiano & Crovella, 2024). Both global warming and climate change are anthropogenic (induced by human behaviour) (Zhang, Li, Tan & Zhong, 2023). Tourism (including hospitality) significantly contributes to sustainable development in South Africa and globally through job creation and local economic (Buhalis, Leung, Fan, Darcy, Chen, Xu, Wei-Han Tan, Nunkoo & Farmaki, 2023). However, tourism also has a detrimental impact on the environment due to an excessive consumption of natural resources, pollution, and solid and liquid waste (Sarudzai & Geoffrey, 2023; Umoh, 2024).

Environmental sustainability, which is described as the process of transforming the living environments or a firm operation and activities into a more environmentally friendly version, can help to ensure the long-term sustainability of the tourism industry (Merkel & Munnecke, 2023). A growing number of hotels, especially large ones, have joined the commitment to environmental protection to attract and retain customers and gain competitive advantage. However, the commitment to environmental protection is limited in small hotels (Lazarus, 2023; Butt, Ghazouani & Maktouf, 2024). Although a single small firm does not have the same environmental impact compared to a large

firm, their combined effects are bigger than that of large firms (Ronalter, Bernardo & Romaní, 2023). However, in recent times, many small firms, including hotels, have started to incorporate environment management into their operation and strategy (Bouslah, Hmaittane, Kryzanowski & M'Zali, 2023). Thus, the focus of the study was small, medium, and micro hospitality firms.

The effectiveness of an organisation's sustainability practices is dependent on employee support and contribution (Lawal, Ndagi, Mohammed, Saleh, Shuaibu, Hassan, Abubakar, Soja & Jagaba, 2024). The overarching aim of sustainability in the hospitality industry cannot be achieved without employee pro-environmental behaviour (PEB) (Leyva & Parra, 2021). Employee PEB can be defined as the actions and behaviours done by employees to improve environmental sustainability in the workplace (Zhang, Li, Tan & Zhong, 2023). PEB can be involuntary (task-related) or voluntary (discretionary) (Lawal et al., 2024). While task-related PEB is mandated by organisations for employees to complete their work, voluntary PEB is done outside of the organisation's formal job requirements (Zhang, et al., 2023). To improve the sustainable operation of firms, it is important to understand the antecedents of employee voluntary PEB (Aziz, Md Rami, Zaremohzzabieh & Ahrari, 2021).

The theoretical frameworks for explaining individual PEB include the Theory of Planned Behaviour (TPB), the Norm Activation model (NAM) and the Value Belief Norm theory (VBN) (Shipley et al., 2023). This is because the two major approaches to predict individual PEB are self-interest motives and pro-social motives (Banunle, 2024). Self-interest motives suggest that individuals engage in PEB because of personal interest and can be linked to attitudinal theories such as the Theory of Reasoned Action (TRA) and TPB (Zeng, Zhong & Naz, 2023). Pro-social motives are linked to moral considerations in PEB and can be explained by the NAM and VBN (Shin et al., 2018). This study examined pro-social motives that can affect employee PEB using the VBN. In addition, the factors that affect PEB include organisational, social, and personal factors (Lazarus, 2023). Social norms are a social factor that describe the rules and standards that members of a group understand, and guide and/or constrain human behaviour (Zhuang, 2023). Anticipated pride is a personal

factor related to the emotions that are evoked by the evaluation of an individual for following personal standards (Shipley et al., 2023). Based on this background, this study examined the antecedents of employee voluntary PEB through the lens of the VBN theory. In addition, the VBN was extended by a social factor (social norms) and a personal factor (anticipated pride).

1.2. PROBLEM STATEMENT

The hospitality industry is a major economic sector in South Africa with a significant contribution to employment and economic growth (United World Tourism Organisation, 2020). However, the hospitality industry also negatively affects the environment through the over-consumption of natural resources, pollution, solid and liquid waste (Leyva & Parra, 2021; Olowoyo et al., 2021). Many hotels have provided environmentally oriented guidelines to employees, which aim to develop and implement environmental initiatives throughout hotels (Martínez et al., 2022). However, the effectiveness of an organisation's sustainability practices depends on the support and contribution of employees (Leyva & Parra, 2021). Most studies on employee PEB have focused on self-interest motives and have adopted the TPB (Yuriev, Dahmen, Paillé, Boiral & Guillaumie, 2020; Müller, Acevedo-Duque, Müller, Kalia & Mehmood, 2021). However pro-social motives such as values can also play an important role in PEB. The VBN theory of environmentalism (Stern, Dietz, Abel, Guagnano & Kal, 1999; Stern, 2000) postulates that values influence PEB through pro-environmental beliefs and personal norms. Values include egoistic, biospheric, openness to change and an altruistic attitude and the four values can be classified broadly as self-transcendence and self-enhancement values. Beliefs include a new ecological paradigm (first order belief) awareness of consequences and ascription of responsibility (second order beliefs). Norms are described as personal norms (Stern, Dietz, Abel, Guagnano & Kal, 1999; Stern, 2000). However, studies based on the VBN are scarce in the context of employee PEB in the hospitality industry. In addition, studies on employee PEB have tended to focus on large firms. Compared to large firms, small firms tend to exhibit a severe lack of resources, dependence on top

managers, and a lower level of awareness, and these impact on their ability to adopt and implement sustainability initiatives (Cantele et al., 2020; Organisation for Economic Co-operation & Development, 2021). Furthermore, social and personal factors can affect employees (Cantele et al., 2020). However, to the best of the author's knowledge, studies on the intervening role of social norms (social factor) and anticipated pride (personal factor) in the relationship between personal norms and employee PEB have not received empirical attention. These highlighted issues create significant gaps in extant research on the antecedents of employee PEB in hospitality firms.

1.3. THE AIM OF THE STUDY

The aim of this study was to investigate the antecedents of employee PEB in hospitality firms by extending the Value-Belief-Norm (VBN) theory of environmentalism. The VBN was extended by social norms and anticipated pride.

1.4. OBJECTIVES OF THE STUDY

The study was based on the following objectives:

- To investigate the relationship between values (altruistic values, biospheric values, and egoistic values) and the new ecological paradigm.
- To determine the relationship between the new ecological paradigm and an awareness of consequences.
- To examine the relationship between an awareness of consequences and an ascription of responsibility.
- To determine the relationship between an ascription of responsibility and personal norms.
- To examine the relationship between personal norms and employee pro-environmental behaviour.
- To determine if anticipated pride moderates the relationship between personal norms and employee pro-environmental behaviour.

- To investigate if personal norms, mediate the relationship between social norms and pro-environmental behaviour.

1.5. HYPOTHESES

H1: Altruistic values are significantly positively related to the new ecological paradigm.

H2: Biospheric values are significantly positively related to the new ecological paradigm.

H3: Egoistic values are significantly positively related to the new ecological paradigm.

H4: The new ecological paradigm is significantly positively related to an awareness of consequences.

H5: An awareness of consequences is significantly positively related to an ascription of responsibility.

H6: An ascription of responsibility is significantly positively related to the personal norm.

H7: The personal norm is significantly positively related to employee pro-environmental behaviour.

H8: Anticipated pride moderates the relationship between the personal norm and employee pro-environmental behaviour.

H9: The relationship between social norms and employee pro-environmental behaviour is mediated by personal norms.

1.6. DEFINITION OF KEY CONCEPTS

- **Employee pro-environmental behaviour**

Employee pro-environmental behaviour (green behaviour) is a type of behaviour by which employees take steps to protect the environment in the workplace (Blakenberg & Alhusen, 2019; de Groot, Bondy & Schuitema, 2021). In this study, employee pro-

environmental behaviour was defined as all actions taken by employees to avoid harm to and/or protect the environment in the workplace.

- **Values**

Values can be defined as a trans-situational goal which varies in the degree of importance and serves as a guiding principle in one's life (Tamar, Wirawan, Arfah & Puti, 2020). In this study, values were a guide for humans to act pro-environmentally. Values include altruistic values, egoistic values and biospheric values.

- **Altruistic values**

According to Kim and Stepchenkova (2020), altruistic values are values that are concerned with helping other people. Altruistic values value human kindness and compassion, as well as the idea of working for the betterment of society (Xu, Li & Chi, 2021; Kim & Stepchenkova, 2020; Gandullia, Lezzi, Parciasepe & Siri, 2021). They are based on the concept of selfless generosity and kindness to others, and they designate the well-being of others as most important (Xu et al., 2021; Bosio & Schattle, 2021; Williams, 2022). In this study, altruistic values were defined as values that emphasise the importance of taking action to protect and preserve the environment for the benefit of future generations, which can manifest in a variety of ways, such as reducing one's carbon footprint, conserving energy and resources, participating in environmental volunteer activities, and advocating public policies that promote sustainable, eco-friendly practices.

- **Egoistic values**

Prakas, Choudhary, Kumar, Garza-Reyes, Khan and Panda (2019); Bouman, Steg and Hal (2018) define egoistic values as values that promote self-interest, rather than concern for the interests of others (Mahmood & Bashir, 2020). Examples of egoistic values include personal gain, power, status, and a focus on achieving one's own goals (Prakas et al., 2019; Bouman et al., 2018; Mahmood & Bashir, 2020; Rodríguez, Pérez & Alonso, 2022). These values may conflict with altruistic values which emphasise care, compassion, and concern for others (Prakas et al., 2019; Bouman et al., 2018,

Steg & Hal, 2018; Rodríguez, Pérez & Alonso, 2022). In this study, egoistic values were defined as personal incentives that guide an individual's ecological behaviour. For example, enhancing one's reputation by appearing to be environmentally conscious (Derdowski, Lukasz Andrzej, Åsa Helen Grahm, Håvard Hansen & Heidi Skeiseid, 2020; Barclay, Barker, 2020; Mahmood & Bashir, 2020).

- **Biospheric values**

Biospheric values are the core principles of environmental conservation and sustainability (Wang, Van der Werff, Bouma, Harder & Steg, 2021). They include the belief that humans have a responsibility to protect the environment, utilise resources responsibly, and strive to live in harmony with nature (Wang et al., 2021; Böhme, Walsh & Wamsler, 2022; Taso, Ho & Chen, 2020; Stadlthanner, Andreu, Font, Ribeiro, Currás-Pérez, 2022). In this study, Biospheric values were referred to as values that are based on the idea that humans are a part of a larger, global environment, and must collaborate to protect and maintain the health of the environment. This often involves engaging in activities such as reducing one's carbon footprint, recycling, volunteering for charity, and promoting sustainable practices in local communities.

- **New Ecological Paradigm**

New ecological paradigm can be defined as the belief that a human has the ability to disrupt the world's natural balance and is a means of assessing people's underlying ecological worldviews (Bronfman, Cisternas, López-Vázquez, Maza & Oyanedel, 2015). In this study, the new environmental paradigm was defined as employees' concern that human activities can negatively affect nature.

- **Awareness of consequences**

Awareness of consequences refers to a disposition to become aware of the potential consequences of one's acts for the welfare of others during the decision-making process (Liv, Liu & Lay, 2021). In this study, awareness of consequences was defined as the awareness of the consequences of one's behaviour on the natural environment.

- **Ascription of responsibility**

Ascription of responsibility is defined as the belief that an individual's actions can either prevent or promote potentially undesirable consequences (Liv et al., 2021). In this study, ascription of responsibility is described as the belief that the behaviour and actions of an employee can either prevent or promote the protection of the environment.

- **Personal norms**

Personal norms can be defined as a self-expectation of a specific action in a certain context, felt as a moral obligation. Personal norms is followed by internal reasons that are congruent with internal values, ideas of right and wrong, good, and bad (Schwartz, 1977; Esfandiar, Dowling, Pearce & Goh, 2020; de Groot, Bondy & Schuitema, 2021). In this study, personal norms refer to individuals' feelings of self-ethical obligation to undertake an activity. Personal norms were defined as a type of self-expectation, reflecting the individual's sense of responsibility for conducting certain acts that will protect the environment.

- **Social norms**

Social norms can be defined as an unplanned result of individuals' interaction with one another that specifies what is acceptable and what is not acceptable in a group or society or group (Bicchieri & Muldoon, 2014). In this study, social norms were defined as the unwritten codes and informal understandings that define what an individual expects of others and what others expect from an individual.

- **Anticipated pride**

In the context of pro- environmental behaviour, pride is anticipated emotions, which are not felt immediately but expected to be felt by an individual after experiencing rewards related to a pro-environmental action or decision (Schneider, Zaval, Weber & Markowitz, 2017; Lima et al., 2019). In this study, anticipated pride was defined as

the anticipated emotion of intense pleasure or satisfaction resulting from one's own pro-environmental accomplishments, or behaviours that are highly valued.

- **Hospitality firm**

According to the Department of Labour (2021), a hospitality firm is a commercial enterprise that provides lodging. Hotels, motels, lodges, guest homes, including bed and breakfast establishments, restaurants, bars, taverns, and cafés are examples of hospitality businesses. A hospitality firm (business) is described in this study as a firm that provides paid housing to guests on a temporary or short-term basis, along with a variety of other benefits such as food and entertainment. This study focused on hospitality enterprises such as hotels, motels, lodges, guest homes, and bed and breakfast establishments.

- **Small medium and micro enterprises (SMMEs)**

In South Africa the National Small Business Act, Act No. 102 of 1996 as amended in 2019 defines SMMEs as “small, medium, and micro enterprises.” The Act separates small firms into three categories based on their size as medium, small, or micro enterprises and categorises them based on turnover or number of employees (Government Gazette, 2019). In this study, SMMEs (in the hospitality industry) were defined in terms of the number of employees in line with the National Small Business Act. Micro: 0-10 employees, Small: 11-50 employees, Medium: 51-250 employees.

1.7. LITERATURE REVIEW

This section examined both the theoretical and empirical literature. The theoretical background of the study was grounded on the Value-Belief-Norm (VBN) theory. The empirical literature review related to the hypotheses of the study.

1.7.1. Theoretical framework

Stern, Dietz, Abel, Guagnano and Kal (1999) developed the Value-Belief Norm (VBN) theory, which is used to describe the effect of human values on behaviour in an environmental context. Stern's (2000) VBN of environmentalism theory connects

Schwartz's (1977) Norm-Activation Model with Dunlap and Van Liere's (1978) New Ecological Paradigm (NEP). The three variables of the Norm Activation Model (Schwartz (1977) are an awareness of consequences, attribution of responsibility, and personal norms. According to the VBN, personal values influence the formation of an individual's general ideas about the environment (NEP). These beliefs will cause the individual to be aware of the implications of their behaviour on the environment, as well as accept a certain degree of accountability (ascription of responsibility). This cognitive process would activate a sense of moral obligation (personal norms) to safeguard the environment. Personal norms will then stimulate pro-environmental behaviour (Stern, 2000). Stern (2000) classifies personal values related to the environment into three categories: biospheric, social/altruistic, and egoistic. These values are characterised as self-transcendence and self-improvement values (Stern, 2000).

1.10. SIGNIFICANCE OF THE STUDY

The United Nations Agenda 2030 and the African Union Agenda 2063 for Sustainable Development place a strong emphasis on environmental sustainability, making this study timely and relevant. Theoretically, the study intended to test the applicability of the extended VBN theory of environmentalism in explaining the pro-environmental behaviour of employees of hospitality firms. The study further intended to show whether or not the predictive power of the VBN will improve by the addition of social norms and anticipated pride. Empirically, the study sought to contribute to the research on how values can affect hotel employee pro-environmental behaviour. Since 1989, South Africa has created numerous environmental policies. Nonetheless, as compared to other countries throughout the world, South Africa has a rather high level of environmental degradation. Businesses are continuing to put a strain on the environment by emitting pollutants and dumping waste in undesignated areas. The findings of this study could be valuable in creating South Africa's environmental policy framework, with the government adopting the recommendations to address the country's environmental sustainability crisis. Furthermore, the hotel business will have a better understanding of the elements that drive employee pro-environmental

behaviour. This could aid in the improvement of environmental sustainability in the hospitality industry.

1.11. CHAPTER OUTLINE

This study has six chapters as follows:

CHAPTER ONE: INTRODUCTION AND BACKGROUND TO THE STUDY

This chapter gives a brief overview of the study, where the problem statement, aim, objectives, and hypotheses of the research were addressed. It also defined all of the concepts linked to this study. Moreover, the chapter addressed the significance of this research and outlined its framework.

CHAPTER TWO: A LITERATURE REVIEW ON PRO-ENVIRONMENTAL BEHAVIOUR, TOURISM, AND SMALL HOSPITALITY FIRMS

The chapter discussed pro-environmental behaviour. The hospitality and tourism industries were also defined. It also focused on small hospitality enterprises, their contributions, environmental impact, and the issues they face.

CHAPTER THREE: A THEORETICAL AND EMPIRICAL LITERATURE REVIEW OF THE DETERMINANTS OF EMPLOYEE PRO-ENVIRONMENTAL BEHAVIOUR

The chapter provided the theoretical and empirical framework of employee pro-environmental behaviour determinants. Also, it explored practical literature to develop a deeper connection between the determinants of employee pro-environmental behaviour and the Value Belief Norm Theory, as well as to construct the forthcoming hypotheses.

CHAPTER 4: RESEARCH METHODOLOGY

The methodologies adopted in the research study were discussed in this chapter. The emphasis was on the research design, the population of the study, the sampling techniques, the data collection methodology used in this study, and then, the data analysis methodologies. This chapter also covered the reliability and validity of the

research instrument. Furthermore, the pre-test study and ethical considerations were discussed.

CHAPTER FIVE: DATA ANALYSIS AND INTERPRETATION OF RESULTS

This chapter discussed the research's overall findings. The data acquired in the chapter were further analysed to interpret the research findings. Furthermore, the hypothesis testing for analysis was described, as well as why the researcher accepted or rejected the presented hypothesis.

CHAPTER SIX: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

In this chapter, the findings of the entire study were used to reach conclusions. Deliberations on the research's theoretical and empirical contributions, research methodology, the academic literature reviewed, and business practises were also presented. This chapter also discussed the research's limitations and potential areas for future investigation.

1.11. SUMMARY

The background of this study was illustrated by stressing the environmental challenges hotels face in the context of green practice and sustainability. In addition, the research problem, study questions, the aim and purposes of the research, and hypotheses were specified, indicating how the problem of the study was addressed. Important research concepts were highlighted in this chapter. Lastly, the chapter outline was presented. The following chapter discusses sustainable development, green practice, small, medium, and micro enterprises (SMMEs) as well as tourism and hospitality.

CHAPTER TWO

TOURISM AND HOSPITALITY

2.1. INTRODUCTION

This chapter explored the multifaceted domains of tourism and hospitality, delving deep into their unique characteristics and operational intricacies. It thoroughly examined the local and international definitions of and tourism, shedding light on the numerous challenges that both sectors grapple with on a daily basis. Moreover, it thoroughly dissected the invaluable contributions of tourism and hospitality industries, while also addressing the formidable challenges they confront in their operations. By closely examining the dynamic interplay between tourism and hospitality, this study aimed to comprehensively investigate the intricate factors that influence employee PEB within the landscape of hospitality firms. With a comprehensive overview of the contents enclosed in this chapter, the subsequent discussion pivoted towards a detailed exploration and elucidation of the fundamental concepts underpinning tourism.

2.4. TOURISM AND HOSPITALITY

2.4.1. Definition of tourism

The tourism industry, also known as the travel industry, is associated with people traveling to other places, either locally or globally, for leisure, social, or business reasons (Fenitra, Premanantro, Sedera, Abbas & Laila, 2022). It is inextricably linked to the hotel, hospitality, and transportation industries, and much of it revolves around keeping tourists happy, occupied, and equipped with what they require while away from home (Fenitra et al., 2022). Fenitra et al. (2022) further define tourists as people who leave their customary surroundings where they live, to visit another environment and usually engage in new activities, regardless of how close or far this environment is, and all of their activities are classified as tourism. In addition, Comerio and Strozzi (2019) define tourists as visitors, and what they do when visiting another location as tourism.

Assaf, Kock and Tsionas (2022) further define tourism as a complicated industry comprising numerous distinct firms, the common thread being that they give products and services to tourists. The United Nations World Tourism Organization (UNWTO) defines tourism as the movement of individuals to nations or areas outside their typical surroundings for personal or professional reasons. Moreover, Mendes, Ferreira and Dias (2022) argue that domestic tourism, inbound tourism, and outward tourism are all types of tourism. The authors define domestic tourism as visitors' activities both within and outside of their home nation (for example, a South African visiting a section of South Africa). They further define inbound tourism as the actions of a visitor from a country other than their own (for example, a British visitor to South Africa). Moreover, outbound tourism entails actions of a resident tourist that take place outside of their own country (for example, a South African visiting another nation) (Mendes et al., 2022).

Tourism is a vital part of the global economy (Baker & Unni, 2019). It generates substantial income and provides employment. In developing nations, it is regarded as the only tool for development and the only way to improve the quality of life (Baker & Unni, 2019). The expansion of the tourism sector has led to the development of not only seaside resorts but also mountain resorts, and it has seen growth from small villages to large cities. Esztergár-Kiss (2019) argues that tourism has potential to have a positive environmental impact by contributing to environmental protection and conservation. Moreover, this author argues that it is a method of raising environmental consciousness, as well as a tool for financing the protection of natural places and increasing their economic importance.

Assaf, Kock and Tsionas (2022), however, argue that tourism has a negative side-effect that manifests itself when the degree of visitor's use exceeds the environment's ability to cope with this use within acceptable change boundaries. Salahodjaev, Sharipov, Rakhmanov and Khabirov (2022) further support this argument by stating that, uncontrolled conventional tourism threatens numerous natural regions across the world. It can cause soil erosion, increased pollution, discharges into the sea, natural habitat loss, increased pressure on endangered species, and heightened vulnerability

to forest fires (it frequently strains water resources and can cause local communities to compete for the use of key resources) (Salahodjaev et al., 2022).

The discussion between these authors emphasises the dual nature of tourism. Although unregulated tourism presents substantial environmental issues; it also offers chances for development and economic advantages. One important topic that comes up in the discussions is the necessity of sustainable tourism practices that strike a balance between environmental preservation and economic growth. The authors' recognition of the favourable and unfavourable effects of tourism on global economies and ecosystems enhances our comprehension of the intricate dynamics underlying this essential sector.

2.4.2. Types of tourism

2.4.2.1. Outbound Tourism

According to Vu, Song, Li and Law (2023), outbound tourism involves residents of one country traveling to another country for leisure or business. It encompasses international travel arrangements, flights, accommodations, tours, and other services. Outbound tourism contributes to cross-cultural exchanges and stimulates economic activities in both the home country and the destination (Vu et al., 2023).

2.4.2.2. International Tourism

International tourism involves traveling across borders for leisure, business, or other purposes (Akmyshevna, Pazilbekovna & Bazarbekova, 2023). It incorporates a diverse array of activities and services, encompassing air travel, lodging, transportation modalities, and recreational pursuits, thereby constituting a comprehensive spectrum of tourism-related experience. Akmyshevna et al. (2023) further state that this type of tourism contributes significantly to the global economy by generating jobs and income.

2.4.2.3. Domestic Tourism

Domestic tourism refers to travel within one's own country (Xiong, Zheng, Gu, Wen & Li, 2023). It includes activities such as weekend getaways, family vacations, and exploring local attractions. Domestic tourism contributes to the economic growth of a

country by supporting various sectors within the hospitality industry (Pérez-Mamani, Sánchez, Benavides, Benavides & Valencia, 2024).

2.4.2.4. Culinary Tourism

According to Martin, Izquierdo and Laguna-Garcia (2021), culinary tourism focuses on exploring different cuisines and culinary traditions in various destinations. It involves experiencing local foods, visiting food markets, participating in cooking classes, and dining at restaurants known for their regional specialties. Culinary tourism enhances cultural experiences and supports local food industries.

2.4.2.5. Business Tourism

Business tourism, also known as MICE (Meetings, Incentives, Conferences, and Exhibitions) tourism, involves traveling for corporate events, conferences, trade shows, and meetings (Baratta, Rossella, Angelo Bonfanti, Maria Grazia Cucci & Francesca Simeoni, 2022). This sector plays a crucial role in the hospitality industry by driving a demand for accommodations, event venues, catering services, and transportation (Badia, Galeone & Shini, 2024).

2.4.2.6. Medical Tourism

Medical tourism revolves around individuals traveling to foreign countries to seek medical treatments or procedures (Asa, Fauk, McLean & Ward, 2024). This type of tourism combines healthcare services with hospitality elements such as accommodations, transportation, and support services for patients and their companions. Medical tourism boosts the healthcare industry and promotes international collaboration in healthcare services (Asa et al., 2024).

2.4.2.7. Hospitality in Tourism

Hospitality is an integral part of the tourism industry as it encompasses businesses such as hotels, restaurants, bars, resorts, cruise ships, theme parks, and service-oriented establishments that provide accommodations, food, beverages, and customer service. The hospitality sector plays a vital role in ensuring guest satisfaction by creating welcoming environments and meeting visitors' needs effectively (Kuo, Fang & LePage, 2022). By comprehending the various categories of tourism and their interconnectedness with the hospitality sector, a deeper insight into the complex

relationship between different aspects of the hospitality industry and diverse travel experiences can be achieved.

2.4.2.8. International and local definitions of hospitality

Hospitality is the reception and entertainment of guests, visitors, or strangers. It is a positive interaction between the host and the visitor in which the host acts with generosity, and the guest seeks food, shelter, safety, and/or entertainment. The following section defines hospitality from both a local and international perspective.

- **Definition of hospitality in South Africa**

The Department of Labour in South Africa defines the Hospitality Sector as any commercial business or part of a commercial business that involves providing accommodation in establishments such as hotels, motels, inns, resorts, and more, as well as offering food and beverage services in restaurants, pubs, cafes, and similar settings. This sector encompasses activities related to travel, tourism, and hospitality, contributing directly or indirectly to these industries. The hospitality industry of South Africa can be divided into distinct sectors, namely, lodging and hospitality establishment sector, sport sector, conference sector, and tourism sector. Mordor Intelligence (2023) reported that the hospitality industry in South Africa is expected to grow at a CAGR of 4.5% during the forecast period of 2023-2028.

According to EHL Hospitality Business School (2023), hospitality in South Africa means extending a welcome to travellers or offering a home away from home. The hospitality and tourism industry in South Africa is a vast sector that includes various economic activities directly or indirectly related to travel and tourism (Donaldson, 2018). This industry sector comprises hotels, resorts, restaurants, catering services, nightclubs, bars, travel and transportation services, tourism, spas, wellness facilities, cruise liners, bus tours, and events (private, business, cultural, and sports) (Rogerson, & Rogerson, 2020).

Donaldson (2018); Rogerson and Rogerson (2020) further argue that the hospitality industry in South Africa can be divided into distinct sectors, including the lodging and hospitality establishment sector, sport sector, and conference sector. In addition, these

authors state that these sectors contribute to the overall hospitality landscape in the country. In summary, the South African hospitality context encompasses the reception and accommodation of visitors, guests coupled with the provision of hosting services (Donaldson, 2018; Rogerson & Rogerson, 2020). This multifaceted concept incorporates aspects of cordiality and welcoming demeanour, culinary and beverage offerings, entertainment and leisure activities, and the cultivation of a positive rapport between hosts and guests. Furthermore, the South African hospitality industry is characterised by its diversity, comprising various sectors that collectively contribute to the nation's hospitality ecosystem (Donaldson, 2018; Rogerson & Rogerson, 2020).

- **Definition of hospitality in Nigeria**

Eneyo (2018); Usoro and Abiagam (2018) define hospitality as courteous and generous behaviour towards visitors and guests, with the ultimate goal of making them to feel at ease. This includes supplying food, drinks, lodging and entertainment to guests to ensure their comfort and satisfaction. Eneyo (2018) further describes hospitality as a firm or organisation's friendly and generous approach toward visitors and guests, including the supply of food, drink, accommodation, and entertainment. These authors emphasise that hospitality is the pleasant and gracious welcoming of guests. Moreover, Angioha, Nwagboso, Ironbar and Ishie (2018) argue that hotels, restaurants, bars, and other related enterprises are all part of Nigeria's hospitality. It provides services to individuals, families, groups, and organisations who are away from their homes for a variety of reasons. The industry makes a substantial contribution to the country's economic growth and development (Angioha et al., 2018).

All these definitions of hospitality in the Nigerian setting are comparable in that they all express the friendly and generous behaviour toward visitors and guests, providing them with food, drink, accommodation, and entertainment. The hotel business in Nigeria is diverse and contributes to the country's economic prosperity (Angioha et al., 2018).

2.5. CONTRIBUTIONS OF TOURISM AND HOSPITALITY

2.5.1. Contribution of tourism to the South African (gross domestic product) GDP

Tourism is an important contributor to the South African economy, providing numerous benefits in terms of employment, foreign exchange production, household income, and government revenues (Rasool, Maqbool & Tarique, 2021). According to StatsSA (2022), the tourism sector in South Africa made a significant contribution to the country's GDP. In 2019, the direct contribution of tourism to South Africa's GDP was ZAR 209 billion, representing 3.7% of the GDP. This contribution was substantial, sustaining a total of 773,532 direct jobs, which accounted for 4.7% of total employment. However, in 2020, there was a notable contribution to the GDP, decreasing to 1.1%. This decline was accompanied by a decrease in the number of direct jobs to 509,000 employees, representing 3.4% of total employment, which was a 35% decrease from 2019 (Stats SA, 2022).

Furthermore, the South African Government (2022) states that the impact of the COVID-19 pandemic on international tourism was severe, with a significant decrease in international tourist arrivals. In 2020, the number of international tourists fell to 2.8 million, a decrease of 72.6% from the previous year. This decline continued in 2021, with international arrivals dropping further to 2.3 million, influenced by the emergence of the Omicron variant of COVID-19, which subdued demand. Moreover, OECD (2022) argues that domestic tourism in South Africa was also significantly affected, with a notable decrease in the number of domestic tourists in 2021. The number of domestic tourists was 47.9% below 2019 levels, with 14.8 million overnight visitors and 68.8 million same-day visitors, showing a substantial decline compared to pre-pandemic levels.

Despite these challenges, South Africa was projected to experience a stronger recovery in tourism in 2022, with a full recovery to pre-pandemic levels expected by 2024. The tourism sector in South Africa is a critical component of the economy, and efforts are being made to enhance its contribution to the broader economy through sustainable and responsible tourism practices (South African Government, 2023). In

2023, the South African tourism industry significantly contributed to the country's Gross Domestic Product (GDP). According to Minister Patricia De Lille's launch of Tourism Month 2023, the sector's contribution to GDP could reach more than R554.6 billion (7.4% of the total economy) by 2032, injecting nearly R287 billion into the national economy. This projection is based on the World Travel & Tourism Council's (WTTC) Economic Impact Report (EIR), which shows that South African Travel & Tourism's GDP will drive the national economic recovery over the next decade. The sector is expected to significantly outstrip the 1.8% growth rate of the country's overall economy, reaching more than R554.6 billion (7.4% of the total economy) by 2032.

The tourism sector's contribution to South Africa's GDP is a vital aspect of the country's economic landscape, directly impacting employment and revenue generation. By leveraging its diverse attractions and rich cultural heritage, South Africa's tourism industry is poised to continue its positive impact on the country's GDP and overall economic development (Deka, Banga & Rukani, 2024).

2.5.2. Contributions of tourism to the developed countries

2.5.2.1 Contributions of tourism in USA

The tourism sector in the United States (U.S.) has a substantial impact on the country's economy. According to the World Travel & Tourism Council (WTTC) (2023), the U.S. travel and tourism sector is projected to contribute over \$2.6 trillion to the U.S. GDP over the next decade, with an expected growth rate of 3.9% annually. In 2022, the GDP contribution of the U.S. Travel & Tourism sector grew by 16.9%, reaching \$2 trillion, and created 2.7 million more jobs compared to the previous year. By the end of 2022, the sector's GDP contribution was expected to exceed \$2 trillion, accounting for 7.6% of the entire U.S. economy.

According to the International Trade Administration (2023), the U.S. travel and tourism industry plays a vital role in the economy, generating \$1.9 trillion in economic output, supporting 9.5 million American jobs, and accounting for 2.9% of the U.S. GDP. International visitors spent \$233.5 billion in the U.S. in 2019, injecting nearly \$640 billion into the economy daily. The sector's GDP contribution is expected to reach \$2.2 trillion in 2023, with job numbers totalling 17.4 million.

Moreover, Statista (2023) states that, in terms of outbound travel trends, the U.S. has seen a 13% increase in forward-looking outbound travel, with popular destinations like Greece, the Dominican Republic, Italy, Jamaica, and Mexico experiencing significant growth. Families are leading the travel recovery, with a 21% growth in family-sized groups over 2019. Mexico, Canada, and the UK are the top international destinations for U.S. visitors, comprising 52% of all outbound departures in 2022. Furthermore, WTTC (2023) states that the resilience and growth of the U.S. Travel & Tourism sector are evident in the positive trajectory it has shown, reflecting its potential and importance in the country's economy. The sector's contribution to GDP, job creation, and international visitor spending highlight its significant role in driving economic activity and employment in the U.S.

2.5.2.2. Contributions of tourism in France

The tourism sector in France plays a significant role in the country's economy, contributing close to 8% of the GDP and providing around 2 million direct and indirect jobs. France has been a leading tourist destination globally, attracting a record 90 million international tourists in 2019, including visitors to its overseas territories (Mrozek, 2022). However, the sector faced challenges due to the COVID-19 pandemic, with a substantial drop in international tourist revenue and visits in 2020. Despite this, France demonstrated resilience compared to its European neighbours, supported by a strong domestic market (Stojanovska-Stefanova, Magdinceva Sopova & Aleksoski, 2021).

According to Mrozek (2022), the French government has been actively supporting the tourism sector through various measures. The creation of the Tourism Sector Committee (CFT) aimed to design effective policies focusing on jobs and training, sustainable development, digitalisation, and competitiveness. During the COVID-19 crisis, emergency measures were implemented to support tourism companies, including job support through partial employment measures and financial assistance such as government-guaranteed loans and the solidarity fund. Teko and Lah (2022) claim that, to aid in the recovery of the tourism sector, the French government announced an €18 billion recovery plan in 2020. This plan included initiatives like an

investment fund managed by Caisse des Dépôts et Consignations, increased funding for the France Tourisme Ingénierie programme, and the creation of a sustainable tourism fund to support restaurants and accommodation providers. This plan is also supported by study by Creel, Holzner, Saraceno, Watt and Wittwer (2020) on *A proposal for a European Covid-19 recovery programme*, where the authors supported initiatives such as an investment fund managed, increased funding for the Tourism, and the creation of a sustainable tourism fund to support restaurants and accommodation providers.

In terms of international tourism, France attracts around 77 million visitors annually and reports significant tourist consumption and a surplus in its tourism balance of payments. Despite this success, public funding for tourism remains relatively low compared to the overall budget. The country's tourism industry benefits from its beautiful landscapes, cultural attractions like museums and monuments (Eiffel Tower, Notre Dame Cathedral), and diverse cities such as Paris. Tourism contributes about 6% of France's revenue and has led to the growth of related industries like handicrafts due to increased visitor demand for traditional French products (Stojanovska-Stefanova et al., 2021).

2.5.2.4. Contributions of tourism in United Kingdom (UK)

According to World Travel & Tourism Council (2022), tourism is a significant contributor to the United Kingdom (UK)'s economy, generating substantial revenue and employment opportunities. In 2022, tourism accounted for 9.6% of the UK's GDP, with a value of £187 billion. This sector supported over 4.2 million jobs, equivalent to 11.8% of the country's total employment (World Travel & Tourism Council, 2022). Tourism also plays a crucial role in promoting cultural exchange and understanding, showcasing the UK's rich heritage and diverse attractions. In 2020, international visitors to the UK reached 37.9 million, with the majority coming from Europe (Office for National Statistics, 2021). These visitors not only generate revenue but also help promote British culture, contributing to the country's global influence and soft power (British Council, 2020). Furthermore, tourism has a positive impact on regional development, with many destinations outside of London benefiting from tourism

investment and growth (Visit Britain, 2022). The UK government has implemented initiatives like the 'Tourism Action Plan' to support the sector's development and promote sustainable tourism practices (Department for Digital, Culture, Media & Sport, 2022).

2.5.3. Contributions of tourism to the developing countries

2.5.3.1. Contributions of tourism in Nigeria

Tourism in Nigeria has contributed significantly to the country's economy, with the sector generating substantial revenue and creating employment opportunities. According to the World Travel & Tourism Council (WTTC) (2022), the travel and tourism sector contributed 3.4% of Nigeria's GDP in 2022, representing a total of N2.5 trillion. This figure is projected to increase by 4.9% in 2023, highlighting the sector's potential for growth and development. The tourism industry has also created direct and indirect employment opportunities, with 2.1 million jobs generated in 2022, accounting for 3.5% of total employment. This figure is expected to rise to 3.1 million jobs by 2032, representing a 0.9% annual growth rate. According to Madandola and Boussaa (2023), tourism in Nigeria has played a significant role in promoting and preserving the country's rich cultural heritage. The sector has provided a platform for showcasing the country's diverse cultures, traditions, and history, attracting both domestic and international tourists. Ezenagu (2020) further states that the promotion of cultural tourism has also contributed to the preservation of historical sites, museums, and monuments, ensuring that the country's cultural heritage is preserved for future generations. Additionally, Omotomilola, Akinola and Aina (2024) argue that tourism has facilitated cross-cultural exchange, promoting understanding and tolerance among different ethnic groups, and promoting social cohesion.

Furthermore, Ezenagu (2020) argues that tourism in Nigeria has also contributed to the preservation and conservation of the country's natural resources. The sector has provided a platform for promoting ecotourism, which has contributed to the protection of natural habitats and the conservation of biodiversity. Ecotourism has also provided a source of income for local communities, promoting sustainable development, and

reducing the pressure on natural resources. Additionally, Omotomilola, Akinola and Aina (2024) further elaborate that tourism has contributed to the development of sustainable infrastructure, such as eco-lodges and nature reserves, which have provided a platform for responsible and sustainable tourism practices.

Moreover, tourism in Nigeria has also contributed to the development of more other infrastructure such as airports, hotels, and transportation systems. The sector has attracted significant investment, with both domestic and international investors recognising the potential of the tourism industry in Nigeria (World Travel & Tourism Council 2023). The development of infrastructure has also contributed to the growth of other sectors, such as construction and transportation, promoting economic development and job creation. Additionally, the tourism sector has provided a platform for the development of small and medium-sized enterprises (SMEs), promoting entrepreneurship and innovation (World Travel & Tourism Council 2023).

2.5.3.2. Contributions of tourism in Kenya

Tourism has been a significant driver of economic growth and development in Kenya. The sector has contributed to the country's GDP, foreign exchange earnings, and overall economic prosperity (Muragu, Yadera & Mbugua, 2023). Through investments in infrastructure, promotion of tourism products, and marketing efforts, Kenya has been able to attract a growing number of international visitors, boosting revenue and stimulating economic activity. The tourism industry's positive impact on various sectors of the economy highlights its importance as a key pillar of Kenya's economic development (Muragu, Yadera & Mbugua, 2023).

Tourism in Kenya has been a key contributor to employment, providing job opportunities for a significant portion of the population (Mugambi, 2023). The sector has created employment in various areas such as hospitality, tour guiding, conservation, and transportation (Mugambi, 2023). According to Statistista (2022), travel and tourism accounted for a substantial percentage of total employment in Kenya, showcasing the sector's role in job creation and economic empowerment. Cowling (2024) in his article demonstrated, in 2021, that travel and tourism contributed

5.4 billion U.S. dollars to Kenya's Gross Domestic Product (GDP). The amount increased by nearly 35 percent compared to 2020, when the tourism industry struggled with the impact of the coronavirus (COVID-19) pandemic.

Furthermore, according to Nthiga, and Imbaya (2023), the tourism industry in Kenya has played a crucial role in preserving the country's natural and cultural heritage. This was further elaborated by Njoya, Efthymiou, Nikitas and O'Connell (2022), in their study where they investigated micro and small-scale culture-based tourism initiatives as a livelihood option for rural women in Kenya. They found that tourist attractions such as national parks, wildlife reserves, and cultural sites have been protected and conserved, contributing to biodiversity conservation and cultural sustainability. By promoting responsible tourism practices and environmental conservation, Kenya's tourism sector has helped in safeguarding the country's rich heritage for future generations (Njoya et al., 2022).

2.5.3. Contributions of hospitality firms

The hospitality industry in South Africa makes significant contributions to the country's economy, employment, and social development.

2.5.2.1. Employment generation

The hospitality industry is a major source of employment, providing job opportunities in various sectors such as accommodation, food and beverage, and transportation. It creates both formal and informal employment, contributing to the overall workforce in South Africa (Nyathela-Sunday, 2022; Sheresheva, 2018; Perinotto et al., 2022). Most of the sectors within the hospitality industry are characterised by small, micro, and medium-sized enterprises accounting for over 90% of the sector. The majority of hotels, accommodation and restaurants are small enterprises with employee numbers of less than 10 people economy (Sucheran, 2021; Olowoyo et al., 2021). Prior to COVID-19, StatsSA (2020) recorded that the tourism sector, of which the hospitality industry is part, contributed R130.1 billion towards GDP in 2018, with 4.5% employment in the same year (Nyathela-Sunday, 2022).

2.5.2.2. Foreign exchange earnings

The hospitality industry is a significant contributor to foreign exchange earnings through tourism activities, particularly accommodation services for international visitors (Soni, 2022; Foster et al., 2022; Raza et al., 2021). Research has shown that the hospitality industry generates a substantial portion of foreign exchange earnings, which is essential for improving the balance of payments and contributing to the country's economic growth (Okafor, 2022; Soni, 2022). In fact, studies have revealed that every dollar spent by international tourists generates additional economic activity, creating a multiplier effect that benefits the local economy (Foster et al., 2022).

The influx of international tourists has a direct impact on the demand for accommodation services, leading to an increase in foreign exchange earnings (Raza et al., 2021). Furthermore, the hospitality industry's foreign exchange earnings have a positive effect on the country's balance of payments, enabling the government to invest in infrastructure development, social services, and other critical sectors (Okafor, 2022). This, in turn, contributes to the overall economic growth and development of the country (Soni, 2022).

Empirical evidence suggests that the hospitality industry's foreign exchange earnings have a significant impact on the economy, particularly in terms of job creation, income generation, and tax revenue (Foster et al., 2022). Moreover, the industry's foreign exchange earnings help to promote economic stability, reduce poverty, and improve living standards (Raza et al., 2021). Therefore, it is essential to recognise the crucial role played by the hospitality industry in generating foreign exchange earnings and prioritise policies and strategies that support its growth and development (Soni, 2022).

2.5.2.3. Multiplier effect

According to Sastri, Naveed and Setiyawan (2024), the hospitality industry exhibits a significant multiplier effect on various economic sectors, including agriculture, retail, and transport. This phenomenon occurs when the growth of the hospitality industry generates a ripple effect, leading to an increased demand for goods and services from

these sectors. For instance, a rise in tourism demand for hospitality services can lead to an increase in demand for agricultural products, such as food and beverages, which in turn stimulates agricultural production and economic activity (Sastri, Li, Naveed & Setiyawan, 2024).

The multiplier effect of the hospitality industry has a cascading impact on the economy, leading to the creation of additional employment opportunities and further stimulating economic growth (Thondhlana & Hlatshwayo, 2018). Research has shown that every dollar spent in the hospitality industry generates additional economic activity, creating a multiplier effect that benefits various sectors (Ifegbesan et al., 2022). For example, a study by Dogru, Mody, Suess, McGinley and Line (2020) found that every 10% increase in hospitality employment leads to a 5% increase in retail employment, demonstrating the significant spillover effects of the hospitality industry on other sectors.

The multiplier effect of the hospitality industry is a critical factor in economic development, as it has the potential to stimulate economic growth, create employment opportunities, and increase economic activity in various sectors (Blakernberg & Alhusen, 2019). Therefore, policymakers and stakeholders should prioritise the development of the hospitality industry, recognising its potential to generate positive spillover effects on other sectors and contribute to overall economic growth and development (Liu et al., 2020). By leveraging the multiplier effect of the hospitality industry, economies can unlock new opportunities for growth and development, leading to improved economic outcomes and increased prosperity.

2.5.2.4. Social development

The hospitality industry contributes to social development by promoting cultural exchange, supporting local communities, and preserving cultural heritage. This is achieved through activities such as offering authentic local experiences, supporting local artisans and craftsmen, and participating in community development projects (Ali, 2023; Süßbauer & Schäfer, 2018).

2.5.2.5. Infrastructure development

The expansion of the hospitality industry is often accompanied by the development of new infrastructure, including hotels, resorts, and transportation networks (Thorntongiu, et al., 2020; Albarracin et al., 2022). This infrastructure development is a critical factor in supporting the growth of tourism, as it provides the necessary facilities and services to accommodate visitors and enhance their overall experience (Lee et al., 2021). Moreover, research has shown that infrastructure development in the hospitality industry can have positive spillover effects on the local economy, contributing to job creation, income generation, and improved economic activity (Thabet et al., 2023).

The development of new infrastructure in the hospitality industry also benefits the local residents by improving connectivity and access to services (Lee et al., 2021). For instance, the construction of new hotels and resorts can lead to the development of new transportation networks, such as roads and airports, which can improve access to remote areas and enhance the overall connectivity of the region (Albarracin et al., 2022). Furthermore, the growth of the hospitality industry can lead to the development of new facilities, such as healthcare centres, schools, and shopping centres, which can improve the quality of life for local residents (Thabet et al., 2023).

The infrastructure development that accompanies the growth of the hospitality industry can also have long-term economic benefits, such as increased economic diversification, improved productivity, and enhanced competitiveness (Thorntongiu et al., 2020). Moreover, research has shown that the development of new infrastructure in the hospitality industry can lead to increased foreign investment, improved trade links, and enhanced economic integration with other regions (Albarracin et al., 2022). Therefore, policymakers and stakeholders should prioritise the development of infrastructure in the hospitality industry, recognising its potential to drive economic growth, improve the quality of life for local residents, and enhance the overall competitiveness of the region.

2.5.2.6. Skills development

The hospitality industry offers a range of opportunities for skills development and training, which can significantly enhance the employability and career prospects of individuals working in the sector (Rasool et al., 2021; Truong et al., 2020). Research has shown that the industry provides a conducive environment for skills acquisition, with many employers offering on-the-job training, apprenticeships, and mentorship programs to their employees (Truong et al., 2020). This is particularly important in a country like South Africa, where there is a pressing need for skilled workers to support the growth of the tourism and hospitality industries (Thondhlana & Hlatshwayo, 2018).

The skills development opportunities in the hospitality industry are diverse and range from basic skills training to specialised courses in areas such as culinary arts, hotel management, and tourism marketing (Rasool et al., 2021). Moreover, the industry's emphasis on customer service, communication, and teamwork skills ensures that employees develop essential soft skills that are transferable across various sectors (Truong et al., 2020). This is particularly beneficial in a country like South Africa, where there is a need for skilled workers who can contribute to the growth and development of the economy (Thondhlana & Hlatshwayo, 2018).

The development of skills in the hospitality industry can also lead to increased career advancement opportunities, as employees can progress from entry-level positions to management roles and beyond (Rasool et al., 2021). Research has shown that employees who receive training and development opportunities are more likely to stay with their employers, leading to reduced turnover rates and improved productivity (Truong et al., 2020). This is particularly important in a country like South Africa, where there is a need for skilled workers to support the growth of the tourism and hospitality industries, and where employee retention is critical for business success (Thondhlana & Hlatshwayo, 2018).

2.5.2.7. Contributions to economic growth

The hospitality industry has historically significantly contributed to the South African economy (Nyathela-Sunday, Septoe, Menze, Banoobai-Anwar, Seager, David & Buser, 2022; StatsSA, 2019). Prior to COVID-19, StatsSA (2020) recorded that the tourism sector, of which the hospitality industry is part, contributed R130.1 billion towards GDP in 2018, with 4.5% employment in the same year (Nyathela-Sunday, 2022). In 2020, travel and tourism contributed nearly 3.7 percent to the GDP of South Africa. The share declined notably from 6.9 percent in 2019, reflecting the impact of the COVID-19 pandemic on the sector (Galal, 2022).

2.6. CHALLENGES FACING TOURISM AND HOSPITALITY

The tourism and hospitality industry faces both local and international challenges that can impact its growth and development.

2.6.1. Local challenges facing tourism and hospitality

2.6.1.1. Labor and Skills Shortage

The tourism and hospitality industry is facing a shortage of skilled labour, particularly due to the emergence of new technologies and changing industry trends. This has forced businesses to invest heavily in training and development to meet the demand for new skills (Kaushal & Srivastava, 2021).

Ghodieh, Abahre, Abahre and Huang (2019) conducted a study that highlighted a shortage of skilled labour, particularly in the areas of management and marketing in tourism and hospitality firms. This finding suggests that the industry is facing a critical skills gap that could potentially hinder its growth and development. Kaushal and Srivastava (2021) argue that the shortage of skilled labour can have far-reaching implications for the industry's ability to effectively manage operations, develop strategic marketing initiatives, and respond to the evolving needs of customer.

Redmond and Sharafizad (2020) further highlight that local businesses struggle to attract and retain skilled workers, such as chefs, hospitality managers, and tour guides, due to limited training and development opportunities, low wages, and poor

working conditions. This shortage of skilled workers results in a lack of expertise, leading to reduced service quality, mistakes, and accidents, which can damage the reputation of local businesses and the industry as a whole.

Kaushal and Srivastava (2021) suggest that, to address this challenge, local stakeholders must invest in training and development programmes, improve wages and working conditions, and promote the industry as a viable and rewarding career path to attract and retain skilled workers. In addition, Redmond and Sharafizad (2020) state that this can be achieved through collaborations between local businesses, education providers, and government agencies to develop and implement effective training programmes, apprenticeships, and mentorship initiatives. By addressing the labour and skills shortage, the tourism and hospitality industry can enhance its competitiveness, improve service quality, and contribute to the local economy's growth and development (Kaushal & Srivastava, 2021; Redmond and Sharafizad, 2020).

2.6.1.2. Access to Capital

Access to capital is a significant local challenge facing the tourism and hospitality industry, hindering its growth and development (Khan, Islam & Hassan, 2021). Many small and medium-sized enterprises (SMEs) in the sector struggle to secure funding, limiting their ability to invest in infrastructure, marketing, and staff development (Khan et al., 2021).

According to Buhalis, Leung, Fan, Darcy, Chen, Xu, Tan, Nunkoo and Farmaki (2023), one major obstacle is the high risk associated with lending to tourism and hospitality businesses, which can be seasonal and vulnerable to external factors like economic downturns and natural disasters. This risk aversion among lenders results in stricter loan requirements, higher interest rates, and shorter repayment terms, making it difficult for SMEs to access capital (Buhalis et al., 2023). Moreover, the tourism and hospitality industry is characterised by high startup costs, including property acquisition, equipment, and staffing expenses. Without access to sufficient capital,

entrepreneurs and small business owners may be unable to launch or expand their ventures, stifling innovation, and job creation.

In addition, Matanzima and Nhiwatiwa (2024) argue that the lack of access to capital hinders the industry's ability to adopt new technologies, sustainable practices, and innovative marketing strategies, making it harder to compete with larger, more established competitors. This limits the sector's potential for growth and development, ultimately affecting local economies and communities that rely on tourism revenue.

To address this challenge, Matanzima and Nhiwatiwa (2024) suggest that local stakeholders, including government agencies, financial institutions, and industry associations, must work together to create more accessible and affordable financing options. This could include initiatives like loan guarantees, mentorship programmes, and crowdfunding platforms, as well as targeted support for underserved groups like women and minority entrepreneurs (Matanzima & Nhiwatiwa, 2024).

Furthermore, Buhalis et al. (2023) posit that enhancing access to capital for the tourism and hospitality industry can facilitate the realisation of its full economic potential, thereby stimulating economic growth, generating employment opportunities, and contributing to the improved well-being and quality of life of local population. It is crucial to address this challenge and ensure that SMEs have the necessary resources to thrive, innovate, and contribute to the sector's long-term sustainability and success.

2.6.1.3. Increasing Construction Costs

The escalating construction costs in the tourism and hospitality industry pose a significant challenge for businesses seeking to expand or upgrade their facilities. This phenomenon is attributable to various factors, including the rising costs of materials, labour shortages, and increased regulatory requirements (Johnson et al., 2020). The confluence of these factors has resulted in a substantial increase in construction costs, thereby impacting the profitability and competitiveness of tourism and hospitality businesses (Kim et al., 2019). The impact of increasing construction costs on the tourism and hospitality industry is multifaceted. On one hand, it limits the ability of businesses to invest in new facilities and upgrade existing ones, thereby constraining

their capacity to meet growing customer demands (Lee et al., 2018). On the other hand, it exacerbates the challenge of maintaining profitability, as businesses are forced to absorb the increased costs or pass them on to customers (Chen et al., 2020).

Wang et al. (2019) suggest that, to mitigate the effects of escalating construction costs, tourism, and hospitality enterprises must adopt innovative strategies and solutions. This may involve embracing sustainable design and building practices, leveraging public-private partnerships, and harnessing innovative building technologies (Wang et al., 2019). By adopting such approaches, businesses can reduce costs, improve efficiency, and maintain their competitiveness in a rapidly evolving market (Zhang et al., 2020).

2.6.1.4. Pricing Pressures

The tourism and hospitality industry operates within a complex pricing landscape, where businesses must navigate the tension between maximising profit margins and maintaining a competitive pricing structure to attract and retain customers (Paulose & Shakeel, 2022). Li and Kumar (2022) have shown that pricing pressures can have a significant impact on the industry's growth and profitability, as customers are increasingly price-sensitive and have access to vast amounts of pricing information (Li & Kumar, 2022). Moreover, the dynamic nature of pricing trends, influenced by factors such as seasonality, demand, and competition, can lead to fluctuations in customer demand and overall industry growth (Chen et al., 2020).

Furthermore, the industry's pricing pressures are compounded by the need to balance short-term revenue goals with long-term strategic objectives (Abdollahpouri, Adomavicius, Burke, Guy, Jannach, Kamishima, Krasnodebski & Pizzato, 2020). For instance, discounting and promotional pricing may generate short-term revenue boosts but can erode profit margins and undermine brand value in the long term (Angeloni & Rossi, 2021). Additionally, premium pricing strategies can yield higher profit margins but may deter price-sensitive customers and limit market share (Abdollahpou et al., 2020). Therefore, tourism and hospitality businesses must adopt

sophisticated pricing strategies that account for these complexities and adapt to changing market conditions (Paulose & Shakeel, 2022).

Moreover, Raza and Govindaluri (2019) identified various pricing strategies that can help tourism and hospitality businesses navigate these challenges, including dynamic pricing, revenue management, and value-based pricing. By leveraging data analytics, market research, and customer insights, businesses can develop pricing structures that optimise revenue, profitability, and customer satisfaction (Lieberman, 2018). Additionally, the use of technology, such as pricing software and revenue management tools, can help businesses streamline their pricing processes and make data-driven decisions (Lieberman, 2018). Ultimately, a deep understanding of pricing pressures and trends is crucial for tourism and hospitality businesses to achieve sustainable growth and competitiveness in an increasingly competitive market (Lieberman, 2018).

2.6.1.5. Infrastructure

The tourism and hospitality industry in South Africa faces significant infrastructure challenges, which hinder its ability to meet growing demand and compete globally. Hoogendoorn and Fitchett (2018) identified inadequate transportation networks, including airports, roads, and public transportation, as major constraints to tourism development. Moreover, Tirado Ballesteros and Hernández Hernández (2021) posit that the limited availability and quality of accommodation facilities, including hotels, lodges, and resorts, restrict the industry's capacity to accommodate tourists, leading to lost opportunities and revenue.

The lack of investment in tourist attractions and activities also limits the industry's growth potential (Salazar, 2018). South Africa's rich cultural and natural heritage, including national parks, museums, and historical sites, requires significant investment to develop and promote tourist attractions (Tirado Ballesteros & Hernández Hernández, 2021). Furthermore, the limited availability of amenities, such as restaurants, shops, and entertainment options, can detract from the overall tourist

experience, leading to negative reviews and reduced repeat business (Hoogendoorn, & Fitchett, 2018).

To address these infrastructure challenges, the South African government and private sector must collaborate to invest in tourism infrastructure development (Rogerson & Rogerson, 2019). This includes upgrading transportation networks, developing new accommodation facilities, and promoting tourist attractions and activities (Van der Merwe, 2020). By prioritising infrastructure development, South Africa can enhance its competitiveness as a tourist destination, increase revenue, and create jobs, ultimately contributing to the country's economic growth and development (World Tourism Organization, 2019).

2.6.2. International challenges facing tourism and hospitality

2.6.2.1. Global Uncertainties

According to Sahoo, Mohanty, Kaushik, Islam and Rourt (2024), global uncertainties, such as natural disasters, health crises, political instability, and security concerns, can have a significant impact on the tourism and hospitality industry, causing disruptions to travel plans and economic instability. These events can lead to a decline in tourism, resulting in economic losses for businesses and communities that rely on tourism as a source of income. In addition, Sahoo, Mohanty, Kaushik, Islam and Rourt (2024) argue that these global uncertainties can also lead to a decrease in consumer confidence, making it even more challenging for businesses in the tourism and hospitality industry to recover from the economic impacts of these events.

Furthermore, businesses in the tourism and hospitality industry can take steps to enhance their resilience to global uncertainties by implementing robust crisis management plans and diversifying their source markets (Zhao, Meo, Ibrahim, Aziz & Nathaniel, 2023). This can include developing contingency plans for potential disruptions, such as natural disasters or health crises, and identifying new markets to reduce dependence on a single source of tourism. Additionally, Openkey Press and Blog (2023) posits that businesses can also focus on building strong relationships

with their customers, providing excellent customer service, and offering unique experiences to differentiate themselves from competitors and attract repeat business.

In addition to these strategies, study by Zhao, Meo, Ibrahim, Aziz and Nathaniel (2023) state that businesses in the tourism and hospitality industry can also benefit from staying up to date with the latest research and trends in the industry. This can include monitoring consumer behaviour and preferences, staying informed about global events and trends that may impact tourism, and identifying opportunities for innovation and growth. Sahoo et al. (2024); Turtureanu, Pripoaie, Cretu, Sirbu, Marinescu, Talaghir and Chițu (2022) further posit that, by taking a proactive and adaptive approach to managing global uncertainties, businesses in the tourism and hospitality industry can better navigate the challenges and opportunities presented by these events and achieve long-term success.

2.6.2.2. Over-tourism

Koens, Postma and Papp (2018) define over-tourism as an unsustainable influx of visitors to coveted tourist hotspots, precipitates a trifecta of devastating consequences, imperilling the environmental, social, and economic resilience of these locales. This phenomenon not only exacerbates ecological degradation, but also compromises the social fabric and economic viability of these areas, thereby undermining the long-term sustainability of tourism itself. Research by Hernandez-Maskivker, Fornells, Teixido-Navarro and Pulido (2021) has shown that over-tourism can lead to environmental degradation, including soil erosion, water pollution, and loss of biodiversity, as well as strain on local infrastructure, including transportation systems, public services, and housing. Moreover, Bertocchi, Camatti, Giove and van Der Borg (2020) contend that over-tourism can also negatively impact the quality of life for residents, causing noise pollution, overcrowding, and increased cost of living.

According to Higgins-Desbiolles (2020) sustainable tourism practices are essential to mitigate the negative impacts of over-tourism. This includes adopting environmentally friendly practices, such as reducing waste and carbon emissions, conserving natural resources, and promoting eco-tourism activities. Additionally Bertocchi, Camatti,

Giove and van Der Borg (2020) argue that visitor flow management strategies, such as dispersing tourists to lesser-known destinations, implementing crowd control measures, and promoting off-season travel, can help to distribute tourists more evenly and reduce pressure on popular destinations. Furthermore, Koens et al. (2019) further argue that involving local communities in tourism development and decision-making processes can help to ensure that tourism is managed in a way that benefits both tourists and residents.

Hernandez-Maskivker et al. (2021) highlight the importance of adopting a holistic approach to sustainable tourism, one that considers the environmental, social, and economic impacts of tourism development. This includes monitoring tourist numbers and behaviour, assessing the carrying capacity of destinations, and implementing policies and regulations to manage tourism sustainably. Moreover, Veríssimo, Moraes, Breda, Guizi and Costa (2020) highlight that educating tourists and promoting responsible travel behaviours, such as respecting local cultures and environments, can also help to mitigate the negative impacts of over-tourism. By adopting sustainable tourism practices and visitor flow management strategies, popular tourist destinations can reduce the negative impacts of over-tourism and promote a more sustainable and responsible tourism industry (Veríssimo et al., 2020).

2.6.2.3. Environmental Sustainability

The tourism and hospitality industry's operations have a profound impact on the environment, contributing significantly to carbon emissions, habitat destruction, and waste generation (Hernandez-Maskivker, 2021). Research has shown that tourism-related activities, such as transportation, accommodation, and recreational pursuits, result in substantial greenhouse gas emissions, with estimates suggesting that tourism accounts for approximately 8% of global carbon emissions (Scott et al., 2010). Furthermore, the industry's expansion into natural areas and sensitive ecosystems has led to habitat destruction and biodiversity loss (Hernandez-Maskivker et al., 2021).

To address these sustainability concerns, embracing eco-friendly initiatives and promoting responsible tourism practices are essential (Buckley, 2011). This includes

adopting sustainable tourism frameworks, such as ecotourism and sustainable tourism certification programmes, which aim to minimise environmental impacts and promote environmentally responsible practices (Honey & Stewart, 2003). Additionally, implementing sustainable operations and management practices, such as energy-efficient technologies, waste reduction and recycling programmes, and environmentally friendly supply chain management, can significantly reduce the industry's environmental footprint (Kirk, 1998).

Moreover, promoting responsible tourism behaviours among tourists and stakeholders is crucial for achieving environmental sustainability in the tourism and hospitality industry (Dolnicar et al., 2019). This can be achieved through education and awareness campaigns, which inform tourists about the environmental impacts of their activities and encourage them to adopt sustainable practices, such as reducing energy consumption, using public transportation, and respecting natural environments (Ramkissoon et al., 2013). By adopting a holistic approach to sustainability, the tourism and hospitality industry can mitigate its environmental impacts and contribute to a more sustainable future.

2.6.2.4. Regulatory and Compliance Challenges

The tourism and hospitality industry faces a complex regulatory landscape, with evolving laws and regulations related to travel, health, and safety presenting significant challenges for businesses (World Tourism Organization, 2022). Research has shown that the industry's compliance with regulations is crucial for ensuring the safety and well-being of tourists, as well as preventing reputational damage and legal liabilities (Hall et al., 2020). Moreover, the COVID-19 pandemic has highlighted the need for businesses to stay informed about changing regulations and implement transparent and compliant practices to mitigate the risks associated with non-compliance (WHO, 2022).

The industry's regulatory and compliance challenges are further compounded by the need to navigate multiple jurisdictions and regulatory frameworks, both domestically and internationally (UNWTO, 2020). Research has emphasised the importance of

collaboration between businesses, regulatory bodies, and other stakeholders to ensure a coordinated approach to regulation and compliance (PwC, 2020). By engaging in open communication and knowledge sharing, businesses can stay abreast of regulatory developments and implement best practices to ensure compliance and mitigate risks (Deloitte, 2022).

In addition, the industry's digital transformation has created new regulatory challenges, particularly in relation to data privacy and security (EU GDPR, 2018). Research has highlighted the need for businesses to prioritise data protection and implement robust cybersecurity measures to prevent data breaches and maintain customer trust (PwC, 2020). By prioritising regulatory compliance and collaboration, businesses in the tourism and hospitality industry can navigate the complex regulatory landscape and ensure a safe and sustainable future for the industry.

2.6.2.5. Shifting Consumer Behaviour

Changing consumer preferences, influenced by factors like sustainability, safety, and experience-seeking, require businesses to understand and respond to evolving trends, personalise services, and leverage digital marketing. To address these local and international challenges, the tourism and hospitality industry must adopt a proactive and strategic approach. This includes investing in innovation, embracing sustainability, enhancing crisis management capabilities, and continuously adapting to meet the changing needs of travellers.

2.6.3. Environmental challenges facing tourism and hospitality

2.6.3.1. Pollution

Tourism can contribute to pollution and carbon emissions, which can have negative impacts on the environment and contribute to climate change (Sheresheva, 2018). Ukpabi et al. (2018) affirm that this is an international challenge that affects the global environment. Sheresheva (2018) discusses the challenges facing the contemporary Russian tourism and hospitality market. The study also profiles the efforts of the Russian government to boost tourism development in different Russian regions that are potentially attractive tourist destinations due to their natural resources and cultural

heritage. The findings of the study shed light on the major shift to domestic tourism that is partly due to the turbulent economic environment that is forcing Russia to search for internal sources of development. At the same time, Sheresheva (2018) notes that the decision to rely on diversity of opportunities and sustainable regional tourism make it possible to have a broad variety of tourist value propositions in almost all parts of Russia. This also makes Russia more attractive to foreign tourists. Still, to make Russia a popular destination internationally, improvement in almost all elements of the Russian tourist product is needed. Sheresheva's study shares knowledge on the fast-developing Russian tourism and hospitality market by unveiling a number of new tourist products and destinations in different Russian regions.

The tourism industry is a significant contributor to environmental pollution and carbon emissions, posing a substantial threat to the global environment (Sheresheva, 2018; Perinotto et al., 2022). Research has shown that tourism-related activities, such as transportation, accommodation, and recreational pursuits, result in significant greenhouse gas emissions, with estimates suggesting that tourism accounts for approximately 8% of global carbon emissions (Ukpabi et al., 2018). Moreover, the industry's reliance on fossil fuels, inadequate waste management, and pollution from tourism infrastructure development further exacerbate environmental degradation (Ukpabi et al., 2018).

The environmental impacts of tourism are far-reaching, with pollution and carbon emissions contributing to climate change, biodiversity loss, and ecosystem degradation (Melubo & Lovelock, 2020). Research has highlighted the need for sustainable tourism practices, such as eco-tourism and responsible travel, to mitigate the industry's environmental footprint (Melubo & Lovelock, 2020). Additionally, implementing environmentally friendly technologies, such as renewable energy sources and sustainable transportation, can significantly reduce tourism's contribution to pollution and carbon emissions (Hernandez-Maskivker et al., 2021).

The international nature of tourism necessitates a global response to address the environmental challenges posed by the industry (UNWTO, 2020). Collaborative efforts between governments, businesses, and tourists are essential to develop and implement sustainable tourism practices, reduce pollution and carbon emissions, and promote environmentally responsible travel behaviours (Hall et al., 2020). By adopting a holistic approach to sustainable tourism, the industry can minimise its environmental impacts and contribute to a more sustainable future for the planet.

2.6.3.2. Depletion of natural resources and waste problems

Tourism can lead to the depletion of local natural resources, such as water and energy, and generate waste problems, such as littering and solid waste (Tirado Ballesteros & Hernández, 2021; Ukpabi et al., 2018). This is a local challenge that affects the natural environment and resources of the tourist destination (Sheresheva, 2018; Perinotto et al., 2022).

Tourism can have a profound impact on the local natural resources of a destination, leading to the depletion and degradation of essential resources such as water and energy (Tirado Ballesteros & Hernández, 2021). Research has shown that tourism development can result in increased water consumption, energy usage, and waste generation, placing a significant strain on local resources and infrastructure (Ukpabi et al., 2018). Moreover, the industry's reliance on single-use plastics, inadequate waste management, and littering contribute to waste problems, harming the natural environment and threatening biodiversity (Sheresheva, 2018).

The depletion of natural resources and waste problems pose significant challenges for local communities and tourist destinations, compromising the long-term sustainability of tourism development (Perinotto et al., 2022). Research has highlighted the need for sustainable tourism practices, such as responsible travel behaviours, eco-tourism, and sustainable resource management, to mitigate the industry's environmental impacts (Melubo & Lovelock, 2020). Additionally, implementing effective waste management strategies, such as recycling and composting, and promoting sustainable consumption

patterns can help reduce waste problems and conserve natural resources (Melubo & Lovelock, 2020).

The local nature of these environmental challenges necessitates a community-based approach to address the depletion of natural resources and waste problems (Hall et al., 2020). Collaborative efforts between local stakeholders, tourists, and tourism businesses are essential to develop and implement sustainable tourism practices, reduce waste, and promote environmentally responsible behaviours (UNWTO, 2020). By adopting a holistic approach to sustainable tourism, local communities can conserve natural resources, mitigate waste problems, and ensure a sustainable future for tourism development.

Expanding on this topic, Perinotto et al. (2022) conducted an in-depth analysis of the pollution challenge, specifically highlighting the depletion of natural resources, with a focus on water, as a notable issue within the tourism and hospitality sector. The research presented concerning data, revealing that the hospitality industry can utilise up to 440 litres of water daily per tourist, a quantity nearly twice the average consumption of a resident in a Spanish urban area. This excessive use of water resources has the potential to result in water scarcity and environmental deterioration, exacerbating the overall environmental footprint of tourism.

2.6.3.3. Energy consumption

The tourism and hospitality industry is a significant consumer of energy, with its energy usage stemming from various aspects of the sector's operations. As highlighted by Damaianti, Farradia, Shafi, Arzaman and Salleh (2023), this environmental challenge is a critical concern that requires immediate attention.

Rajesh, Abd Algani, Al Ansari, Balachander, Raj, Muda, Bala and Balaji (2022) emphasise that the tourism sector consumes substantial levels of energy, which can be attributed to both transport-related activities and destination-related aspects. This includes energy consumption for travel to, from, and within the destination, as well as energy usage in accommodation, food services, and other tourist activities. The

researchers note that the expansion of tourism has led to an increase in fossil energy consumption and significant greenhouse gas emissions, further exacerbating the environmental impact of the industry. This underscores the urgent need for the tourism and hospitality sector to address its energy consumption patterns (Abdou Hassan & El Dief, 2020).

Ben Jebli, Ben Youssef and Apergis (2019) provide a promising perspective, highlighting that investments in energy efficiency and renewable energy in tourism can generate significant returns within a short period of time. This indicates the importance of prioritising energy-saving measures and the adoption of renewable energy sources to address the challenge of energy consumption in the industry. By prioritising energy efficiency, investing in renewable energy, and implementing energy-saving measures, the tourism and hospitality industry can work towards a more sustainable and environmentally friendly future, while also generating significant returns on these investments (Ben Jebli et al., 2019).

The tourism sector consumes significant levels of energy, including transport-related activities and destination-related aspects such as accommodation, food, and tourist activities (Ben Jebli et al., 2019). Investments in energy efficiency and renewable energy in tourism are found to generate significant returns within a short period of time, indicating the importance of addressing energy consumption in the industry travellers (Ben Jebli et al., 2019). Prioritising energy efficiency, investing in renewable energy, and implementing energy-saving measures are crucial steps to address this challenge and move towards a more sustainable and environmentally friendly tourism sector (Abdou et al., 2020).

2.6.3.4. Environmental degradation due to tourism development and growth

The development of tourism infrastructure and construction work can lead to environmental degradation, deforestation, reduction in green spaces, solid waste and sewage, overutilisation of air and water, emission of CO₂ and other gases contributing to air and water pollution, climate change, loss and displacement of biodiversity, and

the degradation of ecosystems (Baloch, Shah, Iqbal, Sheeraz, Asadullah, Mahar & Khan, 2023).

This is a local challenge that affects the natural environment and resources of the tourist destination. Tourism can pose a threat to biodiversity and indigenous cultures, particularly in areas where tourism development is not managed sustainably (Cozma, Coroş, Pop, Gavrilescu & Dinucă, 2023). This is a local challenge that affects the natural environment and cultural heritage of the tourist destination (Baloch et al., 2023). Environmental challenges in the tourism and hospitality industry contribute to the industry's carbon footprint and environmental impact (Tirado et al., 2021; Ukpabi et al., 2018). To address these challenges, pro-environmental behaviour among tourists and hospitality consumers is crucial for promoting sustainability and reducing environmental impacts (Sheresheva, 2018; Perinotto et al., 2022).

2.7. CHAPTER SUMMARY

This chapter reviewed literature on tourism and hospitality from various sources. The definition of tourism, and hospitality firms from various sources at the local and global levels were the main topics of discussion in this chapter. Types of tourism, local and international were explored, and hospitality was defined. Contributions of tourism in developing and developed countries, and contributions of hospitality firms were delved into.

Moreover, the chapter discussed the challenges faced by tourism and hospitality both locally and internationally. The environmental challenges facing tourism and hospitality were also explored, and it was found that pollution, depletion of natural resources and waste problems, energy consumption, environmental degradation due to tourism development and growth were among environmental challenges in tourism and hospitality.

The next chapter reviewed and analysed the existing theoretical and empirical literature on the factors that influence employees' environmental behaviours in the workplace.

CHAPTER THREE

THEORETICAL AND EMPIRICAL LITERATURE ON ANTECEDENTS OF EMPLOYEE PRO-ENVIRONMENTAL BEHAVIOUR

3.1 INTRODUCTION

This chapter focused on the theoretical and empirical literature on the determinants of employee pro-environmental behaviour. The first section of this chapter focused on the theoretical literature, which is based on the theories of environmentalism such as Theory of Planned Behaviour (TPB), Norm Activation Theory (NAM), and Value Belief Norm Theory (VBN). The theory that guided the entire study was the VBN Theory. The VBN is extended by social norms and anticipated pride. In the second section, empirical literature were covered. In addition, empirical literature on the relationship between personal norm and employee pro-environmental behaviour was reviewed, with the moderating effect of anticipated pride. Furthermore, the empirical literature on the relationship between social norms and pro-environmental behaviour was reviewed, with the mediation effect of personal norms. Section four summarised the chapter.

In this literature review, the focus was on the theoretical and empirical literature that informs the research topic of environmentalism. The TPB, NAM and VBN theories of environmentalism as a foundation for understanding antecedents of employee pro-environmental behaviour were explored. By linking these theories to employee pro-environmental behaviour, organisations can gain insights into the psychological mechanisms that underpin environmentally responsible actions in the workplace. Understanding how attitudes, norms, values, and beliefs influence employee behaviour can inform the design of interventions and strategies aimed at promoting a culture of environmental responsibility within organisations.

3.2. PRO-ENVIRONMENTAL BEHAVIOUR

Commonly used terms of pro-environmental behaviour (PEB) include ecological behaviour, responsible environmental behaviour, environ-mentally/ecologically

responsible/friendly behaviour, among others (Lee, 2020; Ferenc & Mónus, 2020; Ifegbesan, Rampedi, Ogunyemi & Modley, 2022). PEB is a personal action taken to demonstrate one's duty to create a sustainable environment (Blakernberg & Alhusen, 2019; Ifegbesan et al., 2022; Chang, Kuo & Chen, 2022). PEB encompasses any actions made by a single person to reduce one's negative environmental impact with the clear purpose of changing the environment (Blakernberg & Alhusen, 2019; Ifegbesan et al., 2022; Chang, Kuo & Chen, 2022). It is complex in its variety as well as its numerous causal influences (Chen, Leng, Ma, Kurths, Lai, Lin & Aihara, 2020; Lee, 2020). To ensure environmental sustainability, humans must adopt ecologically responsible behaviours (Lee, 2020; Chang, Kuo & Chen, 2022; Chen et al., 2020).

According to the United States environmental protection agency (EPA), PEB is a collection of environmental duties that include enhancing environmental knowledge, developing green products and processes, and assessing environmentally detrimental behaviour (EPA, 2022; Rahman & Ali, 2022). For instance, this entails employees conserving energy by switching off unnecessary electrical appliances, using stairs instead of the lift, avoiding single side paper printing, minimising waste, and generating ideas for environmental protection (Okafor, 2022). The good condition of an environment is determined by human attitudes and behaviour (Marshall, Thiault, Beeden, Beeden, Benham, Curnock, Diedrich, Gurney, Jones, Marshall, Nakamura & Pert, 2019). The way humans handle their environment has an impact on the quality of human existence, and a lack of environmentally conscious human behaviour causes worldwide environmental damage (Sorqvist & Langeborg, 2019; Abun & Racoma, 2020).

As pro-environmental behaviour is essential for sustainability, it is crucial to understand the various forms it can take. Having established the importance of pro-environmental behaviour, one then explores the different types of actions that constitute this behaviour. The following section delves into the diverse types of pro-environmental behaviour that individuals and organisations can engage in to mitigate environmental degradation, providing a comprehensive overview of the range of

actions that can be taken to support environmental conservation. By examining the different types of pro-environmental behaviour, we can gain a deeper understanding of how to promote environmental sustainability and encourage individuals and organisations to adopt environmentally friendly practices.

3.3. TYPES OF PRO-ENVIRONMENTAL BEHAVIOUR

3.3.1. Voluntary pro-environmental behaviour

Raza, Farrukh, Iqbal, Farhan and Wu (2021) define Voluntary pro-environmental behaviour (VPEB) as conscious actions taken by individuals or organisations to protect and improve the environment. VPEB, also called discretionary behaviour, is synonymous with discretionary actions taken by individuals or organisations to protect and enhance the environment. This discretionary nature implies that VPEB is not officially mandated or recognised by organisations, but rather stems from individuals going above and beyond their job requirements to engage in environmentally friendly actions. This behaviour is crucial in addressing the challenges of climate change and promoting sustainability. It encompasses a wide range of actions, including energy conservation, waste reduction, and the adoption of environmentally friendly practices (Cheema, Afsar, Al-Ghazali & Maqsoom, 2020).

3.3.2. Factors influencing voluntary pro–environmental behaviour

VPEB is affected by factors such as attitudes, norms, perceived behaviour control, habits, values, and beliefs (Gao, Zhao, Ma & Li, 2023).

3.3.2.1. Attitudes

Attitudes play a crucial role in shaping an individual's behaviour towards environmental sustainability. An attitude refers to a person's evaluation or opinion about a specific behaviour, object, or situation (Thondhlana & Hlatshwayo, 2018). In the context of pro-environmental behaviour, attitudes can either encourage or hinder an individual's willingness to engage in eco-friendly actions (Gao et al., 2023). Gao et al. (2023) further posit that attitudes towards pro-environmental behaviour are essential for

promoting sustainability. The authors argue that when individuals hold a positive attitude towards a particular behaviour, such as recycling or energy conservation, they are more likely to adopt and maintain that behaviour. In addition, they highlight that if an individual believes that recycling is important and beneficial for the environment, they will be more inclined to recycle regularly and encourage others to do the same.

Furthermore, Huoponen (2024) found that negative attitudes can act as a barrier to pro-environmental behaviour. If an individual perceives environmental actions as inconvenient, expensive, or unnecessary, they will be less likely to engage in those behaviours. Therefore, it is essential to foster positive attitudes towards pro-environmental behaviour through education, awareness campaigns, and social influence (Vieira, Castro & Souza, 2023). Moreover, according to Desrochers and Zelenski (2023), by understanding the role of attitudes in shaping pro-environmental behaviour, people can develop effective strategies to promote sustainability and encourage individuals to adopt environmentally friendly practices.

3.3.2.2. *Norms*

Social norms exert a profound influence on behaviour, including VPEB (Soni, 2022; Foster et al., 2022). According to Raza et al. (2021), descriptive norms, which denote perceptions of others' behaviours, can significantly predict individuals' likelihood of engaging in VPEB. For instance, an individual's perception of their colleagues' pro-environmental behaviours, such as recycling or energy conservation, can significantly influence their own likelihood of adopting similar behaviours (Raza et al., 2021). Injunctive norms, which reflect perceptions of others' expectations and attitudes towards VPEB, also play a crucial role in shaping behaviour (Foster et al., 2022). Individuals are more likely to engage in VPEB if they perceive that their peers and community members expect them to do so (Foster et al., 2022). Conversely, a lack of injunctive norms can act as a barrier to VPEB (Raza et al., 2021).

3.3.2.3. *Perceived Behaviour Control*

According to Kaur and Singh (2023), perceived behaviour control (PBC) is a vital construct in understanding pro-environmental behaviour, as it influences an individual's likelihood of engaging in such behaviour. PBC refers to an individual's subjective assessment of their ability to perform a specific behaviour, encompassing their perception of the ease or difficulty of executing the behaviour (Kaur & Singh, 2023). Research conducted by Shen, Rasdi, Ezani and San (2024) has consistently demonstrated a positive correlation between higher levels of PBC and a greater likelihood of engaging in pro-environmental behaviour. The researchers further argued that when individuals perceive that they have control over their behaviour, and that it is easy to perform, they are more likely to adopt pro-environmental behaviours (Shen et al., 2024). For instance, if an employee believes that recycling in their organisation is convenient and accessible, they may be more likely to engage in recycling behaviours (Kaur & Singh, 2023).

Kaur and Singh (2023) highlight that the perception of behaviour control is influenced by various factors, including past experiences, self-efficacy, perceived resources and support, and perceived barriers and obstacles. Enhancing PBC is essential for promoting pro-environmental behaviour, as it can increase an individual's sense of agency and motivation to engage in environmentally friendly behaviours (Kaur & Singh, 2023). Shen (2024) argues that by understanding the complex dynamics of PBC and its influence on pro-environmental behaviour, organisations and policymakers can design effective interventions to enhance PBC and promote sustainable behaviours. For example, providing resources and support, reducing barriers, and offering training and education can all contribute to higher levels of PBC and, subsequently, increased pro-environmental behaviour (Shen, 2024).

3.3.2.4. *Habits*

Habits are automatic, recurrent behaviours precipitated by specific environmental cues (Foroughi et al., 2022). These cues can be physical, social, or emotional, and

once a habit is formed, it can be challenging to modify or extinguish. Research shows that pro-environmental habits, such as recycling, using public transport, or turning off lights when leaving a room, can significantly contribute to VPEB (Michalek et al., 2019; Liu et al., 2020; Thondhlana & Hlatshwayo, 2018). The formation of pro-environmental habits can be influenced by various factors, including personal values, beliefs, and attitudes towards the environment (Thondhlana & Hlatshwayo, 2018). Additionally, external factors such as social norms, peer influence, and environmental cues can also play a role in shaping pro-environmental habits (Foroughi et al., 2022).

The habit formation process involves a gradual shift from intentional behaviour to automaticity, facilitated by repeated performance and reinforcement (Foroughi et al., 2022). Once a pro-environmental habit is formed, it can become an automatic behaviour, requiring minimal cognitive effort or intention (Foroughi et al., 2022). This automaticity can lead to sustained pro-environmental behaviour, even in the absence of conscious intention or motivation (Thondhlana & Hlatshwayo, 2018). By elucidating the role of habits in shaping VPEB, researchers and practitioners can design effective interventions to promote pro-environmental habits, such as providing environmental cues, encouraging social norms, and offering incentives for sustainable behaviour (Michalek et al., 2019; Liu et al., 2020). Leveraging the power of habits can foster a culture of sustainability and promote pro-environmental behaviour (Tu, Li & Zuo, 2023).

3.3.2.5. *Values*

Lima, Falguera, Silva, Maciel, Mariano and Elgaaied-Gambier (2024) define values as the fundamental, abstract beliefs that guide individuals' cognitive processes, influencing their decision-making, behaviour, and evaluation of their actions. Liu et al. (2020) argue that these guiding principles shape individuals' perceptions, attitudes, and motivations, ultimately directing their behaviour. Environmental values, a subset of personal values, emphasise the importance of preserving and protecting the natural world (Liu et al., 2020; Thondhlana & Hlatshwayo, 2018). Research by Michalek et al.

(2019) has consistently demonstrated a positive correlation between environmental values and VPEB.

According to Gavrillets, Tverskoi and Sánchez (2024), individuals who prioritise environmental values are more likely to engage in VPEB, such as reducing energy consumption and carbon footprint, adopting sustainable transportation methods, participating in recycling programmes and waste reduction initiatives, supporting eco-friendly policies and organisations, and encouraging others to adopt environmentally responsible behaviours. Moreover, environmental values are linked to increased eco-friendly consumerism, greater willingness to pay for sustainable products, higher levels of environmental activism, and improved well-being and life satisfaction (Paul-Mgbeafulike, 2023).

By understanding the pivotal role of environmental values in shaping VPEB, organisations and policymakers can design effective interventions to foster a culture of sustainability, promote eco-friendly behaviours, and mitigate environmental degradation (Lima, et al., 2024). In addition, Paul-Mgbeafulike (2023) argues that incorporating environmental values into company missions and policies, providing education and training on environmental issues, and offering incentives for eco-friendly behaviour can encourage individuals to adopt sustainable practices and contribute to a more environmentally responsible future.

3.3.2.6. *Beliefs*

Beliefs are complex cognitive frameworks that shape people's understanding of the world, influencing their perceptions, attitudes, and behaviours (Thornton et al., 2020; Albarracin & Pitliya, 2022). In the context of VPEB, beliefs play a crucial role in determining an individual's likelihood of engaging in environmentally friendly behaviors. Specifically, beliefs about the effectiveness of certain behaviours in addressing environmental issues can significantly influence an individual's motivation to adopt those behaviours (Jaich, Jastram & Blind, 2023).

Jaich, Jastram and Blind (2023) claim that when individuals believe that recycling is an effective way to reduce waste and mitigate environmental degradation, they are more likely to engage in recycling behaviours. Similarly, beliefs about the impact of energy conservation, sustainable transportation, or eco-friendly consumerism can also influence an individual's likelihood of adopting these behaviours (Patwary, Mohd Yusof, Bah Simpong, Ab Ghaffar & Rahman, 2023). Furthermore, Ullah, Lyu, Ahmad, Sami and Kukreti (2024) assert that beliefs can be influenced by various factors, including personal values, social norms, and exposure to environmental information. By understanding the role of beliefs in shaping VPEB, researchers and practitioners can design effective interventions to promote pro-environmental behaviours, such as educating individuals about the effectiveness of certain behaviours or highlighting the social norms surrounding environmental actions (Ullah et al., 2024).

3.3.3. Factors that determine VPEB in the workplace

The integration of sustainability practices into organisational culture have been identified as effective strategies for promoting VPEB in the workplace (Süßbauer, & Schäfer, 2018; Ahmad, Al Mamun, Masukujjaman, Makhbul & Ali, 2023). Factors such as norm-activation, environmental commitment, environmental consciousness, green lifestyle, and green self-efficacy, also play a role in determining VP EB in the workplace (Süßbauer & Schäfer, 2018).

3.3.3.1. Norm-activation

Norm-activation is a psychological process that plays a crucial role in promoting pro-environmental behaviour in various settings, including the workplace. This process enables individuals to become aware of and adopt social norms that support environmentally responsible behaviour (Albarracin et al., 2022; Liu et al., 2020). As individuals become aware of pro-environmental norms, they are more likely to experience a sense of responsibility to conform to these norms, perceive environmental protection as a social expectation, and undergo a shift in their attitudes and behaviours to align with these norms (D'Arco et al., 2023). This phenomenon is

grounded in social norms theory, which posits that individuals are influenced by their perceptions of what others think and do (Ahmad et al., 2023).

In the workplace, norm-activation can be fostered through various strategies, including the communication of environmental policies and goals, encouragement of employee participation in sustainability initiatives, recognition and reward of pro-environmental behaviour, and provision of training and education on environmental issues (Albarracin et al., 2022). By activating pro-environmental norms, organisations can create a culture of environmental responsibility, encouraging employees to engage in voluntary pro-environmental behaviour (VPEB) and promoting a culture of sustainability (Ahmad et al., 2023; Albarracin et al., 2022). The findings of these researchers are consistent with those of Tang, Ren, Wang, Li and Zhang (2023) who argue that norm-activation is a powerful mechanism for promoting pro-environmental behaviour in the workplace, and its leveraging can contribute to a more sustainable future.

3.3.3.2. Environmental commitment

Deng et al. (2022); Li and Wu (2020) define environmental commitment as a multifaceted construct that reflects an individual's dedication to environmental protection and sustainability. This psychological state is characterised by a strong sense of moral obligation, personal responsibility, and motivation to engage in pro-environmental behaviours. Shah et al. (2023) emphasise that environmental commitment is a crucial factor influencing VPEB in the workplace, as it motivates individuals to go beyond their formal responsibilities and engage in discretionary actions that promote environmental sustainability, thereby contributing to a culture of environmental responsibility. Furthermore, the influence of environmental commitment on VPEB is rooted in its ability to foster a sense of ownership and accountability among employees, leading to a culture of environmental responsibility (Ostertag, 2023). When employees are committed to environmental protection, they are more likely to encourage others to adopt environmentally friendly practices, support organisational initiatives promoting sustainability, and engage in innovative behaviours that reduce environmental impact (Tang, Ren, Wang, Li & Zhang, 2023).

Fostering environmental commitment is essential for enterprises seeking to promote a culture of sustainability and reduce their ecological footprint (Ostertag, 2023). By cultivating a workforce dedicated to environmental protection and sustainability, organisations can reap various benefits, including improved organisational reputation, enhanced employee engagement and motivation, and increased innovation in sustainability practices. Therefore, understanding the factors that influence environmental commitment is crucial for developing effective strategies to promote VPEB and sustainability in the workplace (Ostertag, 2023).

3.3.3.3. Environmental consciousness

Environmental consciousness is a vital psychological construct that encompasses an individual's knowledge, attitudes, and beliefs about environmental issues and their consequences on the planet and society (Deng et al., 2022; Zafar et al., 2023). This construct is characterised by an understanding of the interconnectedness of human and natural systems, recognition of the impact of human activities on the environment, and a sense of responsibility to protect the environment (Zafar et al., 2023).

According to Shah et al. (2023); Li and Wu (2020), environmental consciousness plays a significant role in shaping VPEB in the workplace. By fostering a culture of environmental responsibility, hospitality enterprises can encourage employees to engage in pro-environmental behaviours, promote sustainable practices and policies, and support environmental initiatives and projects. This, in turn, can lead to positive outcomes for both the organisation and the environment, such as reduced carbon footprint, cost savings, and enhanced reputation (Shah et al., 2023; Li & Wu, 2020).

According to Deng et al. (2022), cultivating environmental consciousness is essential for hospitality enterprises seeking to promote a culture of sustainability and reduce their ecological footprint. By raising awareness about environmental issues and their impact, organisations can inspire employees to act and make a positive difference in the workplace and beyond (Deng et al., 2022).

3.3.3.4. *Green lifestyle*

A green lifestyle refers to a set of behaviours and practices that prioritise environmental protection and sustainability (Foster et al., 2022; Soni, 2022; Cheema et al., 2020). This factor can influence VPEB in the workplace by promoting a culture of environmental responsibility and encouraging individuals to engage in pro-environmental behaviours (Zafar et al., 2023; Zafar et al., 2023 et al., 2022).

3.3.3.5. *Green self-efficacy*

A green lifestyle encompasses a broad range of behaviours and practices that prioritise environmental protection and sustainability, including energy conservation, waste reduction, sustainable consumption, and eco-friendly transportation (Foster et al., 2022; Soni, 2022; Cheema et al., 2020). Individuals who adopt a green lifestyle are more likely to engage in pro-environmental behaviours, such as recycling, using public transport, and reducing energy consumption, which can have a positive impact on the environment (Cheema et al., 2020)

In the workplace, a green lifestyle can influence VPEB by fostering a culture of environmental responsibility and encouraging employees to adopt sustainable practices. Zafar et al. (2023) argue that employees who prioritise environmental sustainability in their personal lives may be more likely to engage in VPEB, such as energy conservation, waste reduction, and sustainable procurement, in the workplace. Moreover, Zafar et al. (2023) further state that a green lifestyle can also inspire individuals to develop innovative solutions to environmental challenges, promote sustainable practices to their colleagues, and encourage organisations to adopt environmentally friendly policies.

By promoting a green lifestyle, organisations can create a workforce that is committed to environmental sustainability, leading to positive outcomes for both the organisation and the environment (Gumasing & Ilo, 2023). Shahzad, Jianguo and Junaid (2023) in their study found that this can include reduced carbon footprint, cost savings, enhanced reputation, and improved employee engagement and motivation. Therefore,

fostering a green lifestyle is essential for organisations seeking to promote a culture of sustainability and reduce their ecological footprint (Shahzad et al., 2023).

3.3.4. Involuntary pro-environmental behaviour

Jiang, Jackson, Shim, Budhwar, Renwick, Jabbour, Jabbour, Tang, Müller-Camen, Wagner and Kim (2022), defines involuntary pro-environmental behaviours as actions that individuals undertake as part of prescribed tasks, procedures, or organisational practices, rather than voluntary or optional actions. These behaviours are often influenced by formal requirements, regulations, or job responsibilities within the organisational context (Jiang et al., 2022). Kim and Lee (2022) argues that, unlike discretionary behaviours that go beyond what is expected or mandated, non-discretionary pro-environmental behaviours are integral to organisational processes and may include activities like adhering to environmental policies, following waste management protocols, complying with energy-saving guidelines, or participating in mandatory environmental training programmes. Involuntary pro-environmental behaviour is also called non-discretionary behaviour, and it is integral to organisational processes and is essential for ensuring environmental sustainability within the workplace, as it is typically aligned with organisational goals and standards related to environmental protection and conservation (Elshaer, Azazz & Fayyad, 2023).

This behaviours is essential for ensuring environmental sustainability within the workplace and is typically aligned with organisational goals and standards related to environmental protection and conservation. Researchers have identified multiple dimensions of IPEB, such as policy-induced behaviour, social norm-induced behaviour, and behaviour induced by external incentives (Mohanty et al., 2021; Zientara et al., 2018).

3.3.5. Factors influencing involuntary pro–environmental behaviour

2.3.5.1. Policies and regulations

Policies and regulations, such as environmental laws and regulations, play a crucial role in shaping Individual Pro-Environmental Behaviour (IPEB) by establishing a legal framework that fosters environmental protection and sustainability (Thorntongiu et al., 2020). These policies and regulations set clear expectations and guidelines for

individuals and organisations, promoting a culture of environmental responsibility and encouraging the adoption of sustainable practices (Albarracin et al., 2022).

By providing a structured approach to environmental management, Albarracin et al. (2022) posit that policies and regulations can influence IPEB by defining acceptable behaviours, providing incentives for compliance, and imposing penalties for non-compliance. Moreover, according to Thorntongiu et al. (2020), effective policies and regulations can also raise awareness about environmental issues, provide resources and support for sustainable initiatives, and create a sense of accountability among individuals and organisations. As a result, policies and regulations can have a profound impact on IPEB, shaping individual behaviours and organisational practices that contribute to a more sustainable future.

By creating an environment that supports and encourages pro-environmental behaviours, policies and regulations can inspire individuals to act and make a positive difference in their communities and beyond. By fostering a culture of sustainability, policies and regulations can play a vital role in addressing environmental challenges and promoting a healthier planet for future generations (Albarracin et al., 2022).

3.3.5.2. Social norms

Social norms have been identified as a significant influencer of IPEB (Shah et al., 2023). These unwritten rules and expectations perpetuate a culture of environmental responsibility, fostering a sense of obligation among individuals to engage in eco-friendly behaviours (Hughey, 2023). Hughey (2023) further highlights that, by internalising these norms, individuals are more likely to adopt pro-environmental practices, such as recycling, waste reduction, and energy conservation.

Alam (2023) has consistently demonstrated the efficacy of social norms in shaping IPEB. By leveraging these norms, organisations and communities can design targeted interventions to promote sustainable behaviours. Alam (2023) further emphasises that by highlighting descriptive norms (what others are doing) and injunctive norms (what others approve of) can encourage individuals to conform to pro-environmental behaviours. This study argued that, by understanding the mechanisms by which social

norms influence IPEB, researchers and practitioners can develop evidence-based strategies to promote environmental sustainability.

2.3.5.3. External incentives

External incentives, such as financial rewards or penalties, have been demonstrated to significantly influence IPEB by providing individuals with a tangible motivation to engage in eco-friendly behaviours (Asante, 2023; Bai et al., 2021). In addition, Pham, Thai, Heffernan and Reynolds (2024) also demonstrated in their study that external incentives can be an effective way to encourage pro-environmental behaviours, particularly in situations where personal beliefs and values may not be sufficient motivators. Moreover, according to Nivedhitha, Pasricha and Angelin Vilma (2024), financial rewards, such as monetary incentives for recycling or energy conservation, can motivate individuals to engage in pro-environmental behaviours. Conversely, financial penalties, such as fines for littering or illegal dumping, can deter individuals from engaging in environmentally harmful behaviours (Wang et al., 2019; Bai et al., 2021).

2.3.6. Factors that determine IPEB in the workplace

Factors that determine IPEB in the workplace can vary depending on the specific context and industry (Zientara, & Zamojska, 2018). Understanding these factors and their influence on IPEB in the workplace can help organisations develop effective strategies for promoting and fostering a more environmentally conscious workplace culture (Nisar, Khan & Khan, 2021; Hong & Park, 2018).

2.3.6.1. Organisational culture

A work environment characterised by trust, honesty, and fairness (THF) has been found to positively impact IPEB (Hong & Park, 2018). Shah, Fahlevi, Rahman, Akram, Jamshed, Aljuaid and Abbas (2023) argue that THF fosters a culture of environmental responsibility, encouraging individuals to engage in pro-environmental behaviours (PEBs). Shah et al. (2023) further show that THF is positively correlated with psychological safety, open communication, organisational citizenship behaviour, and environmental ethos. These factors contribute to a work environment that supports and encourages IPEB.

A systematic review of 25 studies on THF and IPEB found a significant positive relationship between the two variables (Hong & Park, 2018). Additionally, a meta-analysis of 15 studies on organisational culture and IPEB found that THF was a significant predictor of IPEB (Hong et al., 2020). The findings suggest that organisations can promote IPEB by fostering a work environment characterised by THF. This can be achieved through various strategies, such as implementing fair and transparent policies and practices, encouraging open communication and feedback, recognising and rewarding pro-environmental behaviours, and providing training and education on environmental sustainability (Hong & Park, 2018; Hong et al., 2020).

This study argued that by fostering a culture of environmental responsibility, organisations can tap into the motivational power of THF to promote IPEB and contribute to a more sustainable future.

2.3.6.2. Psychological and social support

A work environment characterised by trust, honesty, and fairness (THF) has been found to positively impact IPEB (Hong & Park, 2018). THF fosters a culture of environmental responsibility, encouraging individuals to engage in pro-environmental behaviours (PEBs) (Ali, Khan, Azeem & Inam, 2023). Research has shown that THF is positively correlated with psychological safety (Kahn, 1990), open communication (Hur, Shin & Yingrui, 2024), organisational citizenship behaviour (Joshi & Ghimire, 2023), and environmental ethos (Joshi & Ghimire, 2023). These factors contribute to a work environment that supports and encourages IPEB.

A systematic review of 25 studies on THF and IPEB found a significant positive relationship between the two variables (Hong & Park, 2018). Additionally, a meta-analysis of 15 studies on organisational culture and IPEB found that THF was a significant predictor of IPEB (Hong et al., 2020). The findings suggest that organisations can promote IPEB by fostering a work environment characterised by THF. This can be achieved through various strategies, such as implementing fair and transparent policies and practices, encouraging open communication and feedback,

recognising and rewarding pro-environmental behaviours, and providing training and education on environmental sustainability.

A work environment built on trust, honesty, and fairness (THF) serves as a powerful catalyst for an IPEB ethos (Joshi & Ghimire, 2023). By fostering a culture of environmental responsibility, THF encourages individuals to engage in pro-environmental behaviours, which is further reinforced by psychological safety, open communication, organisational citizenship behaviour, and environmental ethos (Hong & Park, 2018; Hur, Shin & Yingrui, 2024). The positive correlation between THF and IPEB is well-supported by research, with systematic reviews and meta-analyses consistently demonstrating a significant relationship between the two. By implementing strategies that promote THF, organisations can create an environment that supports and encourages IPEB, ultimately contributing to a more sustainable future (Hur, Shin & Yingrui, 2024).

2.3.6.3. Policy and regulations

According to Eneh, Adeniyi, Akpuokwe, Bakare and Titor-Addingi (2024), policies and regulations that promote environmental protection and sustainability can play a crucial role in promoting IPEB by creating a legal framework that encourages individuals and organisations to engage in pro-environmental behaviours. Research by Eneh, Adeniyi, Akpuokwe, Bakare and Titor-Addingi (2024) has shown that well-designed policies and regulations can set clear expectations and standards for environmental behaviour, providing incentives for individuals and organisations to adopt pro-environmental behaviours. This can create a sense of accountability and responsibility for environmental actions, encouraging the development and use of environmentally friendly technologies and fostering a culture of sustainability and environmental stewardship (Eneh, Adeniyi, Akpuokwe, Bakare & Titor-Addingi, 2024).

Jiang, Xu and Zhou (2023) argue that effective policies and regulations that promote IPEB, include carbon pricing and taxation, renewable portfolio standards, energy efficiency standards, extended producer responsibility, and green procurement policies. These policies and regulations can create a legal framework that supports

and encourages pro-environmental behaviours, contributing to a more sustainable future (Jiang, Xu & Zhou, 2023). By examining the impact of policies and regulations on IPEB, the authors have found that these factors can have a significant influence on individual behaviour (Jiang, Xu, & Zhou, 2023; Hong & Park, 2018). This was revealed by a systematic review of 25 studies on environmental regulations and IPEB, which found a significant positive relationship between the two variables (Kim & Yun, 2019). Similarly, a meta-analysis of 15 studies on environmental policies and IPEB found that policies and regulations were significant predictors of IPEB (Lee et al., 2021).

Overall, the findings suggest that policies and regulations can play a vital role in promoting IPEB and contributing to a more sustainable future. By creating a legal framework that supports and encourages pro-environmental behaviours, policymakers can encourage individuals and organisations to take action to protect the environment.

2.3.6.4. Social norms

Social norms play a profound role in shaping IPEB by cultivating a culture of environmental responsibility and fostering a sense of obligation among individuals to engage in pro-environmental behaviours (Khalid, Anwar-ul-Haq & Mirza, 2024). This cultural phenomenon is rooted in the human tendency to conform to societal expectations and avoid social disapproval. When individuals perceive pro-environmental behaviours as normative, they are more likely to adopt such behaviours, even if they do not necessarily align with their personal beliefs or values (Pino, Giancola, Sannino, D'Amico & Palmiero, 2024).

The influence of social norms on IPEB is perpetuated through various mechanisms (Bilmes & Brooks, 2024). On one hand, descriptive norms, which represent the prevalence of pro-environmental behaviours within a given community, serve as a powerful motivator for individuals to conform. Bilmes and Brooks (2024) argue that when individuals observe their peers recycling or reducing energy consumption, they are more likely to engage in similar behaviours to avoid social disapproval and maintain a positive self-image.

Moreover, Eden, Chisom and Adeniyi (2024) state that injunctive norms, which represent the perceived social approval or disapproval of pro-environmental behaviours, also play a significant role in shaping IPEB. The authors argue that, when individuals believe that their community values and expects pro-environmental behaviours, they are more likely to internalise these values and engage in behaviours that align with these norms (Eden et al., 2024). This internalisation process is thought to be driven by the desire for social acceptance and the avoidance of social sanctions.

In the context of pro-environmental behaviours, social norms can have a profound impact on shaping IPEB. Akinrinola, Okoye, Ofodile, and Ugochukwu (2024) show that individuals are more likely to recycle when they believe that their peers are also recycling. Similarly, Eden et al. (2024) highlight that individuals are more likely to reduce energy consumption when they perceive it as a normative behaviour within their community.

These findings emphasise social norms play a critical role in shaping IPEB by creating a culture of environmental responsibility and encouraging individuals to engage in pro-environmental behaviours. By understanding the mechanisms through which social norms influence IPEB, researchers and policymakers can develop effective interventions that harness the power of social norms to promote environmental sustainability.

2.3.6.5. External incentives

Duong, Doan, Nguyen, Dao and Nguyen (2024) found that external incentives, such as financial rewards or penalties, can significantly influence IPEB by providing individuals with a tangible motivation to engage in pro-environmental behaviours. The authors further found that the impact of external incentives on IPEB is rooted in the human tendency to respond to rewards and punishments, which can shape behaviour and decision-making (Duong et al., 2024). Additionally, Li, Luorio, Fang and Mak (2024) posit that financial rewards, such as cash incentives or tax credits, can motivate individuals to engage in pro-environmental behaviours by providing a tangible benefit. The authors argues that offering rebates for energy-efficient appliances or solar panels

can encourage individuals to invest in environmentally friendly technologies. This is consistent with the finding by Duong et al. (2024) who found that providing financial incentives for recycling or reducing energy consumption can motivate individuals to adopt these behaviours.

Moreover, Yinlong and Jongpil (2024) found that financial penalties, such as fines or taxes, can deter individuals from engaging in environmentally harmful behaviours. The study argues that imposing a carbon tax on polluters can create a financial disincentive for emitting greenhouse gases. Similarly, charging individuals for waste disposal can encourage them to reduce their waste generation (Yinlong & Jongpil, 2024). The study further found that the influence of external incentives on IPEB is also dependent on the perceived value and salience of the incentives. When incentives are perceived as valuable and relevant, individuals are more likely to be motivated to engage in pro-environmental behaviours. Moreover, the timing and frequency of incentives can also impact their effectiveness, with immediate and frequent incentives tend to be more motivating than delayed or infrequent ones (Yinlong & Jongpil, 2024; Duong et al., 2024). Furthermore, Zhang, Shen, Zhao, Wang and Huang, 2024 found that external incentives can also interact with internal motivators, such as personal values and beliefs, to shape IPEB. When external incentives align with internal motivators, they can reinforce and amplify pro-environmental behaviours (Zhanget al., 2024). However, when external incentives conflict with internal motivators, they can undermine intrinsic motivation and lead to decreased engagement in pro-environmental behaviours (Zhang et al., 2024).

Overall, these findings emphasise that external incentives can play a significant role in promoting IPEB by providing individuals with a tangible reason to engage in pro-environmental behaviours. By understanding the mechanisms through which external incentives influence IPEB, researchers and policymakers can design effective incentive programmes that promote environmental sustainability.

2.3.6.6. Workload and physical activity

The level of physical activity and workload can significantly influence IPEB by impacting an individual's energy and motivation to engage in pro-environmental behaviours (Shen, Rasdi, Ezani & San, 2024). When individuals are physically active and have a manageable workload, they are more likely to have the energy and motivation to engage in pro-environmental behaviours (Mehmood, Jabeen, Rehman, Iftikhar & Khan, 2024). Mehmood et al. (2024) further reveal that physical activity has been shown to increase energy levels and enhance overall well-being, which can in turn increase motivation to engage in pro-environmental behaviours. Moreover, physical activity can also increase exposure to natural environments, which can foster a sense of connection to nature and increase pro-environmental behaviours (Mehmood et al., 2024).

On the other hand, Mehmood et al. (2024) argue that a high workload can lead to physical and mental fatigue, reducing an individual's energy and motivation to engage in pro-environmental behaviours. When individuals are overwhelmed with work demands, they may prioritise tasks that are perceived as more urgent or important over pro-environmental behaviours (Mehmood et al., 2024). Brown (2024) further highlights that the impact of physical activity and workload on IPEB can also depend on individual differences, such as personality traits and values. For instance, individuals with a strong environmental values orientation may be more likely to prioritise pro-environmental behaviours despite a high workload or low physical activity levels. Furthermore, Shen, Rasdi, Ezani and San (2024) proffer that the relationship among physical activity, workload, and IPEB is complex and influenced by various factors, including the type and intensity of physical activity, the nature of the workload, and individual differences in personality and values (Shen et al., 2024). Understanding these factors can help researchers and policymakers to develop effective interventions that promote IPEB by considering the physical and mental demands on individuals.

These studies consistently indicate that the level of physical activity and workload can significantly influence IPEB by impacting an individual's energy and motivation to engage in pro-environmental behaviours. By recognising the interplay among physical

activity, workload, and IPEB, researchers and policymakers can develop effective strategies to promote environmental sustainability.

2.3.6.7. Essential job functions

According Mehmood et al. (2024), the level of physical activity and workload can significantly influence IPEB by impacting an individual's energy and motivation to engage in pro-environmental behaviours. The authors argue that when individuals are physically active and have a manageable workload, they are more likely to have the energy and motivation to engage in pro-environmental behaviours. Physical activity has been shown to increase energy levels and enhance overall well-being, which can in turn increase motivation to engage in pro-environmental behaviours (Shen, Rasdi, Ezani & San, 2024). In addition, physical activity can also increase exposure to natural environments, which can foster a sense of connection to nature and increase pro-environmental behaviours (Mehmood et al., 2024).

Moreover, a high workload can lead to physical and mental fatigue, reducing an individual's energy and motivation to engage in pro-environmental behaviours (Langenbach, Berger, Baumgartner & Knoch, 2020). When individuals are overwhelmed with work demands, they may prioritise tasks that are perceived as more urgent or important over pro-environmental behaviours. Furthermore, the authors also revealed that the impact of physical activity and workload on IPEB can also depend on individual differences, such as personality traits and values. Individuals with a strong environmental values orientation may be more likely to prioritise pro-environmental behaviours despite a high workload or low physical activity levels (Langenbach et al., 2020).

These studies reveal that the relationship among physical activity, workload, and IPEB is complex and influenced by various factors, including the type and intensity of physical activity, the nature of the workload, and individual differences in personality and values. Understanding these factors can help researchers and policymakers develop effective interventions that promote IPEB by considering the physical and mental demands on individuals.

2.3.7. The difference between VPEB and IPEB

IPEB and VPEB are important areas of research in environmental behaviour, they differ in terms of the volition, motivation, and measurement of the behaviour.

2.3.7.1. Volition

VPEB is a type of behaviour that is consciously chosen by individuals based on their personal values, beliefs, and attitudes towards the environment (Ghazali et al., 2019; Latif et al., 2023). This behaviour is motivated by intrinsic factors, such as personal convictions and ethics, and is often characterised by a genuine desire to protect the environment. For instance, an individual may choose to recycle because they believe it is essential for the planet's future or opt for public transport due to concerns about air pollution.

IPEB is a distinct type of behaviour that is shaped by external factors, including social norms, policies, and regulations (Moon et al., 2023). Extrinsic factors, such as peer pressure, convenience, or economic incentives, drive this behaviour. For example, an individual may recycle because it is mandatory in their community or use public transport because it is convenient or cheaper. While both VPEB and IPEB contribute to environmental sustainability, research suggests that VPEB is often more sustainable and long-lasting since it stems from personal convictions (Ghazali et al., 2019). In contrast, IPEB may be more susceptible to change when external factors are removed (Moon et al., 2023). Understanding the differences between VPEB and IPEB is essential for developing effective environmental conservation strategies that promote sustainable behaviour.

2.3.7.2. Motivation

The motivation behind VPEB is often intrinsic, driven by personal values and beliefs. In contrast, the motivation behind IPEB may be extrinsic, driven by external incentives or regulations (Latif, Gaskin, Gunarathne, Sroufe, Sharif & Hanan, 2023). According to Moon, Lee and Jeong (2023), VPEB is motivated by intrinsic factors, which means that individuals engage in environmentally friendly actions due to their personal values, beliefs, and attitudes. This motivation stems from within, driven by a genuine desire to protect the environment and promote sustainability. Individuals with intrinsic

motivation feel a sense of personal responsibility towards the environment and act in accordance with their values and beliefs, willing to make sacrifices or invest effort for the greater good. They also derive a sense of satisfaction and fulfilment from engaging in pro-environmental actions (Moon et al., 2023).

In contrast, Latif, Gaskin, Gunarathne, Sroufe, Sharif and Hanan (2023) argue that IPEB is motivated by extrinsic factors, such as social pressure or norms, economic incentives or rewards, government regulations or policies, and fear of punishment or consequences for non-compliance. Extrinsic motivation is driven by external factors, rather than a personal desire to protect the environment. While extrinsic motivation can still lead to pro-environmental actions, it may not be as sustainable or long-lasting as intrinsic motivation. Individuals with extrinsic motivation may only engage in environmentally friendly behaviours as long as the external incentives or pressures are present, rather than adopting sustainable practices as a habitual part of their lifestyle.

2.3.7.3. Measurement

Measuring VPEB may be more challenging than measuring IPEB, as VPEB is based on an individual's personal values and beliefs, which can be difficult to quantify (Lee et al., 2023). In contrast, IPEB may be easier to measure, as it is based on external factors that can be more easily observed and quantified (Lee et al., 2023; Latif et al., 2023). Measuring VPEB poses significant challenges due to its intrinsic nature, rooted in personal values, beliefs, and attitudes. These abstract constructs are difficult to quantify, as they vary in intensity, scope, and expression across individuals. Moreover, personal values and beliefs are often abstract and intangible, subject to individual interpretations, influenced by cultural and social contexts, and dynamic and evolving over time (Lee et al., 2023).

According to Latif et al. (2023), IPEB is driven by external factors, which are more concrete and observable, making measurement easier. External factors can be quantified through surveys and questionnaires, observational studies, experimental designs, and statistical analysis of data on energy consumption, waste reduction, or

sustainable practices. For instance, IPEB measures may involve tracking the frequency and duration of pro-environmental actions, amount of resources conserved, or waste reduced, participation in environmental programmes or activities, and compliance with environmental regulations or policies.

The disparity in measurement challenges highlights the need for innovative approaches to capture the complex and subjective nature of VPEB, while leveraging the relative ease of measuring IPEB to inform environmental conservation strategies (Latif et al., 2023). Researchers and practitioners must develop and employ creative methods to assess VPEB, such as in-depth interviews, focus groups, and content analysis of personal writings or testimonials, to better understand and promote pro-environmental behaviours (Lee et al., 2023; Latif, et al., 2023).

The theoretical literature review provided valuable insights into the motivations and drivers behind VPEB, which is essential for understanding why individuals engage in sustainable practices. Theories such as the Value-Belief-Norm theory and the Theory of Planned Behavior offer a framework for understanding the psychological factors influencing VPEB. By examining the literature on pro-environmental behaviour, one can better understand how personal values, beliefs, and attitudes shape an individual's decision to engage in environmentally friendly actions.

3.2 THEORETICAL LITERATURE REVIEW

3.2.1. Theory of Reasoned Action

The Theory of Reasoned Action (TRA) was developed by Martin Fishbein and Icek Ajzen in 1967, and it derived from previous research in social psychology, persuasion models, and attitude theories. Ajzen and Fishbein (1967) defined TRA as a cognitive theory and mathematical model that helps psychologists understand human behaviour in specific contexts (Ajzen & Fishbein, 1967). The TRA is a mathematical model that allows scientists to predict behavioural intentions as a function of attitudes and subjective norms. The TRA aims to explain the relationship between attitudes and behaviours within human action. It is mainly used to predict how individuals will behave

based on their pre-existing attitudes and behavioural intentions (Ajzen & Fishbein, 1967).

The three most important components of the TRA are beliefs, attitudes, and intentions (Ajzen & Fishbein, 1967). Beliefs usually describe the probability that a person thinks some action will cause a certain outcome; attitudes concern whether or not someone thinks that outcome is favourable or unfavourable; and intention is the way that someone intends to behave. The TRA was later revised and expanded by the two theorists in the following decades to overcome any discrepancies with the Theory of Planned Behaviour (TPB) and reasoned action approach (Ajzen & Fishbein, 1967).

3.2.2. Theory of Planned Behaviour

The Theory of Planned Behaviour (TPB) is a social-psychological theory that explains human decision-making processes and predicts individual behaviour (Ajzen, 1991). The theory argues that the successful completion of human behaviours is primarily controlled by will (Ajzen, 1991). It originates from the theory of multi-attribute attitude (TMA) and the TRA. In addition, the TRA is a cognitive theory that claims an individual's decision to engage in a certain behaviour can be predicated by their intention to engage in that behaviour (Heydari, Xiaohu, Lai & Shang 2020). Intentions are thought to convey the motivating factors that influence an action, and they also serve as indicators (Ajzen, 1991).

According to Ajzen (1991), human behaviour is founded on three types of considerations: behavioural beliefs based on outcomes behaviour, normative beliefs originating from considerations of pressure from others, and control beliefs indicating factors that control the performance of the behaviour. Individuals are more likely to engage in pro-environmental behaviour if they believe it will provide them with positive consequences and social approval, and if they have greater control over the behaviour (Ajzen, 1991). Furthermore, the theory proposes that individual behaviour is driven by behavioural intentions, which are the function of three determinants: the individual's attitude toward behaviour, subjective norms, and perceived behavioural control (Ajzen, 1991).

3.2.2.1. Attitudes

Attitudes denote an individual's comprehensive assessment of a particular behaviour, encompassing a multifaceted amalgamation of cognitive, affective, and conative components. Personal attitudes represent the cumulative integration of an individual's knowledge, beliefs, values, and prejudices, both positive and negative that are invoked when considering a specific behaviour (Unggul Saragih & Said, 2024). According to Saragih and Said (2024), this integrative construct embodies the entirety of an individual's subjective experience, encompassing their understanding, feelings, and predispositions regarding the behaviour in question. The attitude construct is thus a complex mental state that influences an individual's perception, information processing, and behavioural inclinations (Saragih & Said 2024; Unggul Saragih & Said, 2024). Furthermore, personal attitude construct is forged through the dynamic interplay of various psychological and social factors, including experiential learning, cultural and social conditioning, and individual differences in personality and values (Yudhistira, Kurniasari & Setyo, 2023). As such, attitudes serve as a critical mediator of behavioural intentions and actions, and their examination is essential in understanding human behaviour and decision-making processes values (Yudhistira, Kurniasari & Setyo, 2023).

3.2.2.2. Subjective norms

Subjective norms represent an individual's perception of the social consensus surrounding a particular behaviour, encompassing the belief about whether most people approve or disapprove of the behaviour. This construct captures the perceived social pressures that influence an individual's behavioural intentions and actions, stemming from their beliefs about the expectations of others. In addition, Ardiyanto, Lin, Maulidah, Rahman and Shaleh (2024) argue that subjective norms incorporate both the perceived expectations of others, including significant others, peers, and societal groups, and the individual's subjective evaluation of those expectations. This evaluation encompasses the extent to which the individual values, differences, or complies with the perceived expectations of others, thereby influencing their behavioural decisions.

Moreover, Gavrillets, Tverskoi and Sánchez (2024) found that the subjective norm construct is rooted in social influence theory, highlighting the significance of social factors in shaping behavioral choices. By considering the perceived approval or disapproval of others, individuals weigh the potential social consequences of their actions, such as social acceptance, rejection, or sanctions. This cognitive process integrates an individual's personal attitudes, beliefs, and values with their perceived social environment, ultimately influencing their behavioural intentions and actions (Bhagat-Conway, Mirtich, Salon, Harness, Consalvo & Hong, 2024).

3.2.2.3. Perceived behavioural control

Bhagat-Conway et al. (2024) defines perceived behavioural control (PBC) as an individual's subjective assessment of their capacity to execute a specific behaviour within their particular context. This construct encompasses the degree to which individuals believe they possess the necessary skills, resources, and opportunities to perform the behaviour successfully (Bhagat-Conway et al., 2024). PBC is significantly influenced by various factors, including self-efficacy, which is the individual's belief in their ability to accomplish tasks and achieve goals. Additionally, external factors such as environmental conditions, like the physical and social setting of a classroom, can also shape PBC Yu (2024). Furthermore, the availability of time, resources, and support can also impact an individual's perception of their ability to perform the behaviour (Setiawan, Hafizah & Sapitri, 2024).

According to Yu (2024), the interplay between these factors shapes an individual's perceived control over their behaviour, influencing their motivation, confidence, and ultimate decision to engage in the behaviour. Conversely, constraints like limited time or inadequate support can diminish PBC, hindering behavioural intention and execution. By understanding PBC, researchers can identify strategies to enhance individuals' perceived control, fostering behavioral change and goal achievement (Abd Rahman, Ju, Razali, Ridzuan & Kong, 2024).

3.2.2.4. Intention

According to the TPB, intentions to perform a specific behaviour are a function of three determinants: attitudes, subjective norms, and perceived behavioural control. These

variables interact to shape an individual's intention to engage in a behaviour, with stronger intentions increasing the likelihood of behaviour execution (Ajzen, 1991). Attitudes, subjective norms, and perceived behavioural control collectively influence behavioural intentions, which in turn predict behaviour. The TPB posits that changes in intention and behaviour are contingent upon changes in these three determinants (Ajzen, 1991). Specifically, modifications in attitudes, subjective norms, or perceived behavioural control can lead to corresponding changes in intentions and behaviour (Ajzen, 1991).

For instance, an increase in positive attitudes towards a behaviour, a shift in subjective norms to favour the behaviour, or an enhancement of perceived behavioural control can strengthen intentions and subsequently increase the likelihood of behaviour performance (Atmini & Prastiwi, 2024). Conversely, decreases in these determinants can weaken intentions and reduce behaviour likelihood. The TPB suggests that understanding the dynamics of these variables is essential for predicting and influencing behavioural outcomes. By targeting attitudes, subjective norms, and perceived behavioural control, interventions can effectively modify intentions and behaviour, promoting behavioural change and improvement (Ajze,1991); Atmini & Prastiwi, 2024).

3.2.2.5. Behaviour

Zareban, Oudi-Akbari, Jadgal, Ansari, and Hosseinzehi Zamani (2024) argue that behaviour represents the manifestation of an individual's thoughts, feelings, values, beliefs, and intentions, and is shaped by a complex interplay of factors, including cognitive, affective, social, cultural, and environmental influences. Moreover, Liao (2023) states that behaviour can be characterised by its complexity, ranging from simple, reflexive responses to complex, goal-directed actions, and can be influenced by various psychological, social, and contextual factors. Furthermore, Liao (2023) claims that understanding behaviour is essential in various fields, such as psychology, education, marketing, and public health, as it enables the development of effective interventions, programmes, and policies aimed at promoting positive behaviour change, improving well-being, and enhancing overall quality of life.

According to Garces-Velastegui (2023) and Irwin (2024), the study of behaviour is rooted in various theoretical frameworks, including cognitive-behavioural theory, social learning theory, and behavioural economics, among others. These frameworks provide insights into the underlying mechanisms and processes that govern behaviour, informing the development of evidence-based strategies and interventions aimed at modifying behaviour to achieve desired outcomes. By examining behaviour through a scientific lens, researchers and practitioners can identify determinants, patterns, and correlates of behaviour, ultimately informing efforts to promote behaviour change and improvement (Garces-Velastegui, 2023; Irwin, 2024).

3.2.3. Studies that have used the TPB

The TPB has been widely used in pro-environmental research to understand and predict individuals' behaviours towards the environment. A scoping review by Yuriev, Dahmen, Pails, Boiral and Guillaumie (2020) examined the application of the TPB in pro-environmental behaviours and found that the TPB is one of the most widely used frameworks for studying individual behaviours. Furthermore, Si, Shi, Tang, Wen, Miao and Duan (2019) in their bibliometric analysis study, examined the application and efficiency of the TPB in several domains, including environmental science, through meta-analysis or systematic review. Moreover, Tamar, Wirawan, Arfah and Putri (2021), in their quantitative study, employed the TPB to predict pro-environmental behaviours. The study found that that only biospheric values are positively affected pro-environmental behaviours. Environmental knowledge negatively moderated the relationship between prosocial values and environmental attitudes. Similarly, high egoistic value potentially reduced the effect of environmental attitude on pro-environmental behaviours. Environmental knowledge could impede the positive impacts of prosocial values while egoistic value negates the effect of attitude on pro-environmental attitude.

Alzubaidi, Slade and Dwivedi (2021) examined antecedents of consumers' pro-environmental behaviours by extending the TPB with materialism and innovativeness to examine the antecedents of consumers' pro-environmental behaviours. The results revealed that consumers' intentions to adopt direct- and indirect-PEBs are affected by

innovativeness, materialism, perceived consumer effectiveness, and environmental concern, but not by social influence.

A study by Palupi and Sawitri (2018) used the TPB to predict pro-environmental behaviour in the case of energy conservation. The study found that young people with critical thinking, and good environmental education, are expected to behave more environmentally friendly for creating a sustainable future. A study by Lucarelli, Mazzoli, and Severini (2020) applied the TPB to examine pro-environmental behaviour during the COVID-19 pandemic and found that the TPB is commonly used in waste management, green consumption, climate, and environment, and saving. Through the Partial Least Squares-Multi-Group Analysis (PLS-MGA), the study revealed that individuals with a greater awareness of interdependencies between the COVID-19 and climate change exhibit both higher Intention and reinforced pro-environmental behaviours. Overall, the TPB has been used as the theoretical foundation for studies on pro-environmental behaviour, and it has been found to be a useful framework for understanding and predicting individuals' behaviours towards the environment.

3.2.4. Limitations of the Theory of Planned Behaviour (TPB)

The TPB is a widely used theory in the study of pro-environmental behaviour (Alzubaidi et al., 2021). However, it has some limitations and does not take into consideration some factors that are important in understanding pro-environmental behaviour (Palupi & Sawitri, 2018). Some of the limitations of TPB are discussed below:

3.2.4.1. *Limited scope*

The Limited Scope of the Theory of Planned Behaviour (TPB) is a concern, as it primarily concentrates on individual-level factors, such as attitudes, beliefs, and intentions, to predict pro-environmental behaviour. However, this narrow focus neglects the significant influence of broader social and cultural contexts in which such behaviour takes place. This oversight is notable, as social norms, cultural values, and environmental policies can substantially shape an individual's likelihood of engaging in pro-environmental behaviour (Lucarelli et al., 2020). By ignoring these contextual factors, the TPB may oversimplify the complexities of pro-environmental behaviour

and limit its ability to effectively predict and promote sustainable behaviours (Shen, Rasdi, Ezani & San, 2024)

3.2.4.2. Assumption of rationality

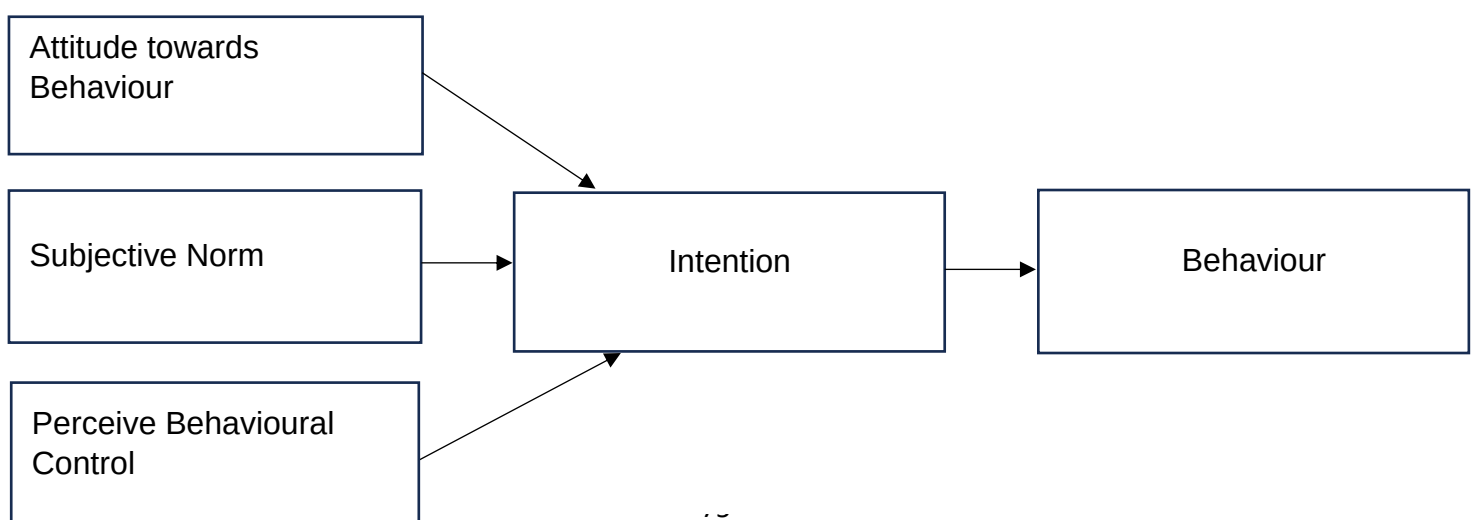
TPB assumes that individuals make rational decisions based on their attitudes, subjective norms, and perceived behavioural control (Si, et al., 2019). However, individuals may not always act rationally, and their behavior may be influenced by emotions, habits, and other non-cognitive factors (Arfah & Putri, 2021).

3.2.4.3. Lack of consideration of moral norms

TPB does not consider moral norms, which are an important factor in pro-environmental behaviour (Palupi & Sawitri, 2018). Since TPB does not take into consideration aspects such as values, identity and personal norms, among other factors that can affect intention and behaviour, the researcher deemed it imperative to apply another theory to the study in harmony with the TPB. Such a theory was The Norm Activation Theory (NAT) because it proposes that moral norms play a crucial role in shaping pro-environmental behaviour. Moreover, NAT suggests that individuals are more likely to engage in pro-environmental behaviour when they feel a moral obligation to do so (Yuriev et al., 2020).

Figure 3.1 below illustrates the aspects of the TPB:

Figure 3.1: Theory of Planned Behaviour



Source: Ajzen (1991)

The NAT is important in studies on pro-environmental behaviour because it takes into consideration the role of moral norms in shaping behaviour (Schwartz, 1977). It suggests that individuals are more likely to engage in pro-environmental behaviour when they feel a moral obligation to do so (Schwartz, 1977). The NAT also considers the broader social and cultural context in which pro-environmental behaviour occurs. Therefore, it complements the TPB by providing a more comprehensive understanding of pro-environmental behaviour.

3.2.5. Norm activation theory

NAT was initially formulated by Schwartz (1977) based on the idea that moral norms dictate what people believe and how they behave (Schwartz, 1977). The theory explains that PEB is caused by a chain reaction of three variables including adverse consequence (AC), ascribed responsibility (AR), and personal norm (PN) (Fang, Chiang, Ng & Lo, 2019).

3.2.5.1 Aspects of NAT

Fang et al. (2019) proffer that AC is defined as the awareness of oneself to the possible negative consequences to others if one is not acting pro-environmentally. In other words, it describes ascribed responsibility as a sense of responsibility to those possible negative consequences (Ghazali, Nguyen, Mutum & Yap, 2019). Personal norm is a moral obligation for someone to do or to refrain from doing a certain behaviour (Mikuła, Raczowska & Utzig, 2021).

Vicente, Marques and Reis (2019) add that NAT identifies the drivers influencing human intention towards altruistic and pro-environmental behaviors. According to Setiawan, Afiff and Heruwasto (2020), pro-environmental behaviour is often depicted as a type of pro-social behaviour in the sense that it leaves positive effects on others and includes behaviours that reduce a person's destructive effects upon natural systems that are shared across multiple human and non-human communities. Benyamin, Chaidir and Ariyanto (2018) say that, within the NAT theory, behaviours or

intentions are a function of personal norms (PN), which in turn, are regulated by awareness of consequence (AC) and ascription of responsibility (AR). NAT posits that behaviour begins with a person's awareness of the consequence of a destructive behaviour, followed by developing a sense of responsibility regarding the adverse consequences of that behaviour, and then ultimately raises the person's intentions to act in a pro-social manner.

Behavioural intention is thought as a functional relationship between PN, AC, and AR. AC activates the PN because when people become aware of their negative consequences upon others, it creates a sense of commitment. AC makes a person aware of the positive effects of pro-social and pro-environmental behaviours on others. AR involves a person's sense of responsibility for the consequences of pro-social and pro-environmental behaviours toward others. PN reflects a sense of moral commitment to do, or not to do, certain actions that lead to pro-environmental behaviours. PN is used as the most important variable of the NAM model to predict individual behaviours. In general, while people are aware of the negative consequences of their behaviour on others (i.e., AC) and hold themselves responsible (i.e., AR), they would be engaged with PN behaviours which in turn directly influence the individuals' intention.

NAT theory has been applied in case studies of various pro-environmental behavioural contexts, including those related to travelers, convention attendees and tourists. There is some debate regarding the relationship and order to the NAT variables, and how they affect one another. The original NAT treats these variables as successive and linear (i.e. awareness of consequence→ascribed responsibility→personal norm→behavioural intentions) and this has been corroborated by empirical evidence. However, a second viewpoint depicts that AC and AR can directly influence PN which initiates pro-environmental intentions and behaviours. A third viewpoint hypothesises that AC and AR modulate the relationships between PN and pro-environmental intention, indicating that the contribution of PN to pro-environmental intention is stronger in a group of people with higher levels of AC and AR. PN has a significant influence on performing pro-environmental behaviours and plays an intermediate role between AC and AR.

3.2.5.2 Merging TPB with NAT

NAT, rooted in pro-social behavioural intention and TPB based in self-interested motivation are widely adopted in the environmental psychology literature, though there are specific advantages to applying the two models in tandem in order to improve responsiveness, data depth and hence useful when seeking to better explore the participants' attitudes toward pro-environmental behaviours. The principle advantage of a combined model is that it allows consideration of both pro-social and self-interested motivational factors in concert with one another, and hence more rounded insights into pro-environmental behavioural context than their independent application. By integrating NAT and TPB models, the researcher assessed the dynamism among four variables of an AC, Attitude, SN, and PN. Within the literatures combining these models, there is a general consensus on the positive and significant association between Attitude and AC.

3.2.6. Studies that have used NAT

The NAT has been used in pro-environmental studies to understand the drivers influencing human intention towards altruistic and pro-environmental behaviours. The theory suggests that personal norms, which are moral obligations to engage in pro-social behaviours, are activated by awareness of consequences and ascription of responsibility (Schwartz, 1977).

Savari et al. (2023) integrated the NAT and TPB to investigate farmer pro-environmental behavioural intention. They found that awareness of consequence, perceived behavioural control, and subjective norms were the strongest indicators of pro-environmental behavioural intention. Fang et al. (2019) used the NAT to predict the pro-environmental behaviours of public servants at the central and local governments in Taiwan. They found that personal norms, awareness of consequences, and ascription of responsibility were significant predictors of pro-environmental behaviour.

Oh and Ki (2023) extended the NAT to understand publics' support for environmentally responsible organisations. They found that publics' awareness of environmental consequences had a positive effect on perceived environmental responsibility of

organisations and organisational norm, which can have an impact on publics' supportive behaviour toward environmentally responsible organisations. Harland et al. (2018) investigated situational and personality factors as direct or personal norm-mediated predictors of pro-environmental behaviour. They found that personal norms were the strongest predictor of pro-environmental behaviour. Damaneh et al. (2023) integrated the NAT and TPB to investigate farmer pro-environmental behavioural intention. They found that awareness of consequence, perceived behavioural control, and subjective norms were the strongest indicators of pro-environmental behavioural intention. In summary, the NAT has been used in various studies to investigate pro-environmental behaviour. Personal norms, awareness of consequences, and ascription of responsibility are some of the key factors that activate pro-environmental behaviour.

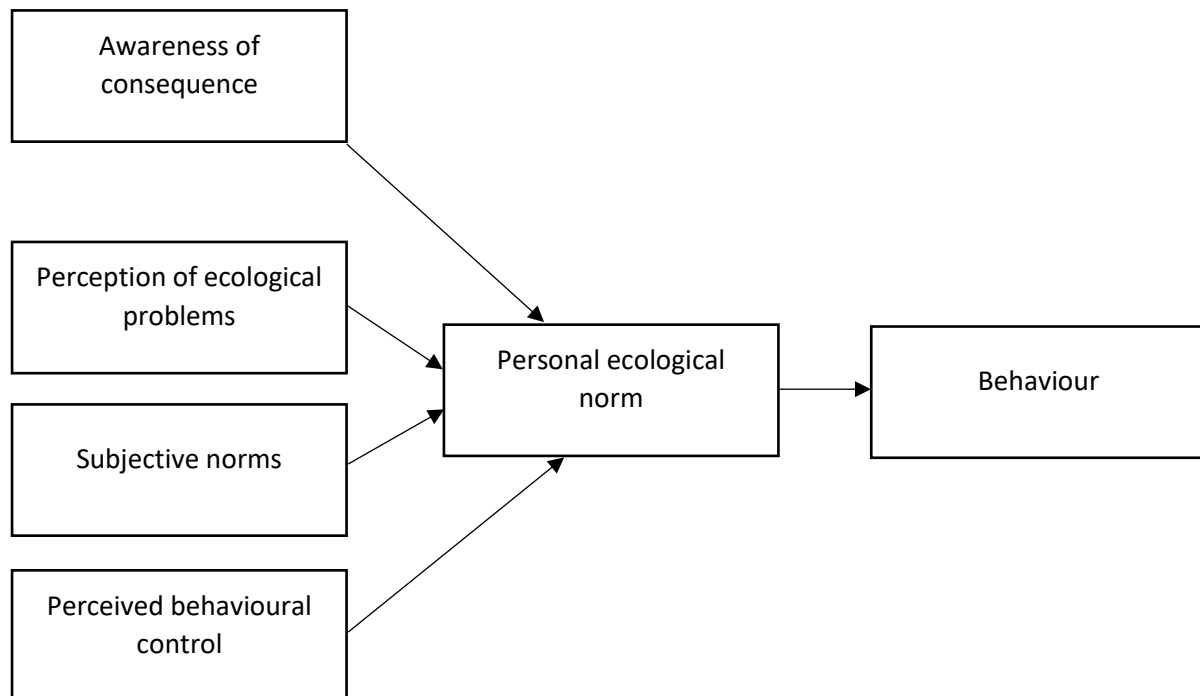
3.2.7. Limitations of the Norm Activation Theory (NAT)

The NAT has some limitations that have been identified by researchers. These limitations include: lack of specificity, limited scope and lack of empirical support. The NAT does not provide specific information on how personal norms are formed and how they interact with other factors to influence behaviour (Fang et al., 2019). The NAT focuses on personal norms and does not account for other factors that may influence pro-environmental behaviour, such as situational factors and social norms (Savari et al., 2023). Some studies have found limited empirical support for the NAT in predicting pro-environmental behaviour (Oh & Ki, 2023; Damaneh et al., 2023).

Given these limitations, researchers have turned to other theories to better understand pro-environmental behaviour. One such theory is the VBN theory, which suggests that pro-environmental behaviour is driven by personal values, beliefs, and norms. In this theory, higher AC will cause higher AR as well, and higher PN accordingly (FeldmanHall, Son & Heffner, 2018; Shanka & Kotecho, 2021). Benyamin et al. (2019) further states that, PN will, in the end, drive someone to act pro-environmentally, which causes a higher rate of PEB (Setiawan, Afiff & Heruwasto, 2020). NAT is especially important in explaining PEB, as variables specific to a certain behaviour will generate a stronger correlation with the intention to behave or the behaviour itself (Mikuła,

Raczkowska, Utzig, 2021; Setiawan, Afiff & Heruwasto, 2020). Figure 3.2 below illustrates the components of NAT:

Figure 3.2: Norm Activation Theory



Source: Author's computation

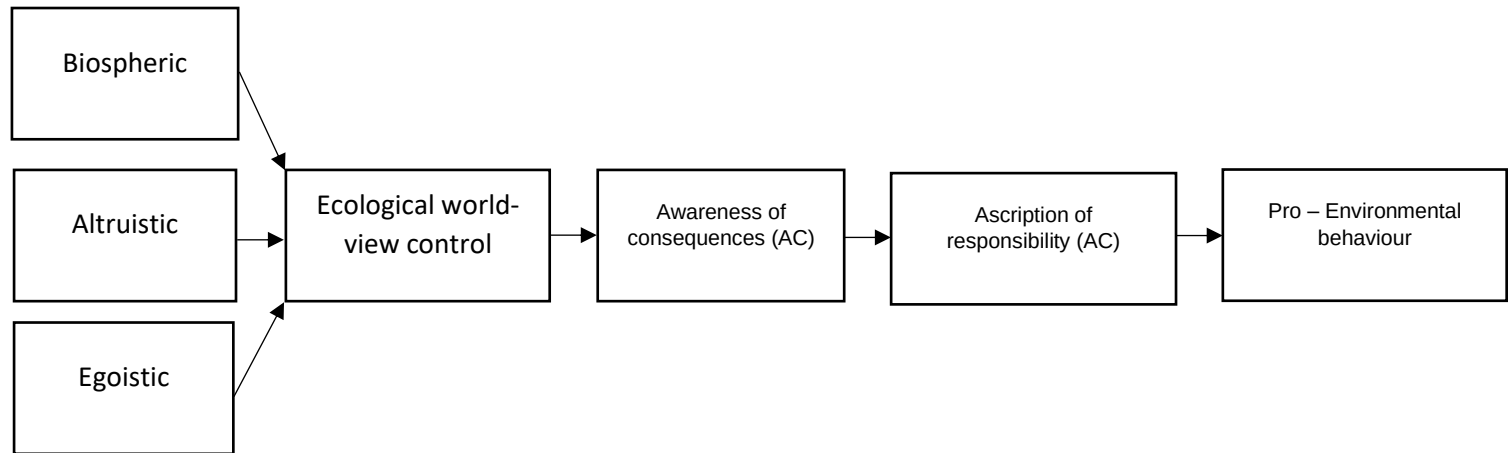
The VBN theory has been found to be a more comprehensive and effective framework for understanding pro-environmental behaviour than the NAT. Therefore, researchers have shifted their focus to the VBN theory to better understand the drivers of pro-environmental behaviour.

3.2.8. Value belief norm theory

The Value Belief Norm (VBN) theory by Stern was established to explain the influence of human values on behaviour in an environmentalist context. The VBN theory suggests that, perceiving adverse effects of individual actions towards the environment, could promote mitigation behaviour (Stern, 1999). The VBN theory of environmentalism postulates a causal chain of five variables, namely, (a) values, (b) the New Environmental (or Ecological) Paradigm (NEP), (c) awareness of consequences (AC), (d) ascription of responsibility (AR) to self-beliefs, and (e)

personal norms (PN) (Stern, 1999). The elements of the VBN Theory are represented thus:

Figure 3.3: Value belief norm theory



Source: Stern (1999).

3.2.9. Values

Values are an essential component of the VBN theory proposed by Stern (1999). The theory proposes that norm-based actions flow from three factors: acceptance of particular personal values, beliefs that things important to those values are under threat, and beliefs that actions initiated by the individual can help alleviate the threat and restore the values. The VBN theory links three other theories: norm-activation theory, the theory of personal values, and the New Ecological Paradigm hypothesis.

3.2.10. Component of values

The personal values component of the VBN theory involves a generalisation of Schwartz's theory, which specifies six main features of values: (1) values are beliefs linked inextricably to affect, (2) values refer to desirable goals that motivate action, (3) values transcend specific actions and situations, (4) values serve as standards or criteria, (5) values are ordered by importance, and (6) the relative importance of values varies among individuals and cultures. The VBN theory proposes that personal values are the first factor that influences norm-based actions. The VBN theory proposes that personal values are the first factor that influences norm-based actions. The theory

links personal values to pro-environmental beliefs and norms, which in turn influence pro-environmental behaviour.

3.2.11. The New Environmental (or Ecological) Paradigm (NEP)

The New Environmental (or Ecological) Paradigm (NEP) is a conceptualisation that focuses on the belief of human ability to disrupt the natural balance and the limited capacity of the environment to absorb the impacts of human activities. The NEP Scale is a widely used measure of endorsement of a “pro-ecological” worldview. The NEP Scale consists of five subscales. Its components are: limits to growth, anti-anthropocentrism, anti-exemptionalism, postmaterialist and ecologism. Limits to growth reflects the belief that the earth has limited resources and that human activities can exceed the earth’s carrying capacity (Ito, Kobayashi, Murasawa, Narita & Nakazono, 2018). Hence, Ito et al. (2018) add that there is a need to treat the earth and its resources responsibly to ensure their sustainability and the well-being of humankind. This speaks to the responsibility of humankind towards the environment, which if abandoned, environmental degradation will be inevitable, and ultimately, human life will be in jeopardy. Therefore, NEP not only highlights the human ability to disrupt the natural balance and the limited capacity of the environment, but also informs humans about their obligation towards the preservation of the earth.

Anti-Anthropocentrism reflects the belief that humans are not the most important species on earth and that other species have the right to exist (Xiao, Dunlap & Hong, 2019). For this reason, Xiao et al. (2019) purport that humans should bear in mind the possible suffrage of species other than humans due to the disruption and or destruction of the earth. Their discussion lambasts humans for selfish behaviour in their effort to benefit from the resources of the earth, purporting that other species, irrespective of their being non-human, have an equal right to benefit from the earth. Therefore, the notion that humans are the most important species on earth is nullified in this regard.

Anti-exemptionalism reflects the belief that humans are not exempt from the laws of nature and that they cannot control nature (El Tabaa & El Tabaa, 2020). In other

words, humans should not live on earth as if nature operates under their sovereignty. According to El Tabaa and El Tabaa (2020), this awareness could potentially remind humans that they are not absolved from the consequences that could emanate from a disrupted or destructed nature. It follows then that humans should subject themselves to the laws of nature and not the other way around. Seemingly, this conscious and willing subjection could contribute towards nature conservation, which will be a benefit to both humans and nature itself. Therefore, there is a need for a harmonious co-existence of humans and nature to ensure the perpetuity of both.

Postmaterialist reflects the belief that material goods are not the most important things in life and that people should focus on personal growth and self-expression (Machemer, Duchek, Harnack, Grella, Nikitaev & Smith, 2022). According to Machemer et al. (2022), the disruption and ultimate destruction of nature emanates from the desires for material goods. Attendant to this desire is greed and a disregard of the environment. Hence, exponents of the postmaterialist component advocate personal growth and self-expression apart from the need to destroy the environment towards their attainment. On the other hand, ecologism reflects the belief that the environment is important, and that people should take action to protect it (Kumar & Varghese, 2022). In other words, the onus to preserve the environment lies with human beings. If this onus is disregarded, the destruction of the environment becomes a norm, to the detriment of both the environment and people.

3.2.13. Awareness of consequences (AC)

Awareness of consequences (AC) is a component of the VBN theory, which posits that people's values and beliefs influence their intentions to perform pro-environmental behaviours. AC refers to an individual's beliefs about the consequences of their actions, particularly in terms of social harm (Xiao et al., 2019). One may argue that if people are aware of the consequences of their actions, they will most probably act in a manner that prevents those consequences. In the same vein, if people are not aware of the consequences of their actions, both positive and negative, they will not take into cognisance the impact of their attitude and behaviour towards the environment.

Closely linked to such actions will be people's beliefs and values, which have a bearing on people's intentions towards the environment.

3.2.14. Components of AC

3.2.14.1. Beliefs about the consequences of one's actions

AC refers to an individual's beliefs about the consequences of their actions, particularly in terms of social harm. This includes beliefs about the impact of one's actions on the environment, society, and future generations (Ho, Wu & Hsieh, 2023). In other words, an individual's beliefs regarding the consequences of their behaviour towards the environment can contribute to their efforts to protect the environment or to destruction, depending on whether those beliefs are pro-environmental or not.

3.2.14.2. Perceived responsibility

AC is closely linked to the ascription of responsibility (AR) for environmental behaviours. When individuals are aware of the consequences of their actions, they may feel a greater sense of responsibility to act in a pro-environmental manner (Badawi, Adelazim Ahmed, Alotaibi, Abbas, Ali & Shaker, 2024). Implicit in this view is the notion the preservation of the environment relies largely on people's sense of responsibility towards it or lack thereof. In other words, if people consider the impact of their actions on the environment, there will be a high probability that the environment will be preserved. This denotes the essence of being aware of one's responsibility and what that awareness is likely to yield in as far as the preservation of the environment is concerned.

3.2.14.3. Moral obligation

AC can also influence an individual's sense of moral obligation to act in a pro-environmental manner (Torrejon & Israel, 2022). When individuals are aware of the consequences of their actions, they may feel a greater sense of moral obligation to act in a way that minimises harm to the environment and society (Torrejon & Israel, 2022). In other words, each human being will live with a sense of burden for the preservation of the environment, so much so that they will live with the conviction that it is their ethical responsibility to protect both the environment and society. In this way,

hazardous actions towards the environment may be minimised or totally eradicated, that is if all humans consider it their moral obligation to protect the environment.

3.2.14.4. Personal norms

AC can also influence the development of personal norms, which are internalised standards of behaviour that guide an individual's actions (Aguilar, Martinez & Caleman, 2018). When individuals are aware of the consequences of their actions, they may be more likely to develop personal norms that prioritise pro-environmental behaviour (dela Peña, Macale & Largo, 2018). These norms may be transferrable from one generation to the next, and therefore ensure an intergenerational transmission of values that protect the environment. In this way, successive generations are likely to develop both a personal and communal code towards the protection of the environments, especially if there is a deliberate effort to transmit those norms.

3.2.15. Ascription of responsibility (AR) to self-beliefs

Ascription of responsibility (AR) is a component of the VBN theory that is related to self-beliefs. AR refers to the extent to which individuals believe that they are responsible for their actions and the consequences that follow (Winingsih, Rahmayanti, Budiaman & Miarsyah, 2022). AR is closely linked to Awareness of Consequences (AC) and can increase the likelihood that a person will feel morally obliged to act in a pro-environmental manner. AR can also influence the development of personal norms that prioritise pro-environmental behaviour (Ahmed, Badawi, Alotaibi, Abbas & Ali, 2023). This can occur by holding people accountable for their actions towards the environment. For instance, if people pay a fine or are arrested when they behave in an unbecoming manner towards the environment, there might be an eradication of hazardous behaviours towards the environment.

3.2.16. Components of Ascription of Responsibility

The components of AR include beliefs about responsibility, moral obligation, personal norms, and ascription of responsibility to self-beliefs (Garcia, Aguirre & Galasinao, 2020). AR is closely linked to self-beliefs, particularly beliefs about responsibility for causing or alleviating threats to any valued objects. When individuals accept responsibility for their actions, they are more likely to feel a sense of moral obligation

to act in a pro-environmental manner and develop personal norms that prioritise pro-environmental behaviour (Garcia et al., 2020).

3.2.16.1. Beliefs about responsibility

AR refers to the extent to which individuals believe that they are responsible for their actions and the consequences that follow (Hamm & Su, 2021). This includes beliefs about the impact of one's actions on the environment, society, and future generations (Chen, 2020).

3.2.16.2. Moral obligation

AR can increase the likelihood that a person will feel morally obliged to act in a pro-environmental manner (Lee, Cho, Kim, Lee, Capin & Swanson, 2022). This is because individuals who accept responsibility for their actions are more likely to feel a sense of moral obligation to act in a way that minimises harm to the environment and society (Nasir & Iqbal, 2019).

3.2.16.3. Personal norms

AR can also influence the development of personal norms, which are internalised standards of behaviour that guide an individual's actions. When individuals feel a sense of responsibility for their actions, they may be more likely to develop personal norms that prioritise pro-environmental behaviour (Torrejon & Israel, 2022).

3.2.16.4. Ascription of responsibility to self-beliefs

AR is closely linked to self-beliefs, particularly beliefs about responsibility for causing or alleviating threats to any valued objects. When individuals accept responsibility for their actions, they are more likely to believe that they have the ability to alleviate threats to the environment and society.

3.2.15. Personal norms (PN)

Personal norms are one of the components of the VBN theory. Personal norms (PN) are feelings of moral obligation to do "the right thing" (Xiao et al., 2019; El Tabaa & El Tabaa, 2020). They are regarded as a strong motivator to encourage pro-environmental intention and behaviour. In addition, personal norms can moderate the relationship between social norms and behaviour, meaning that personal norms can

weaken the impact of social norms on behaviour (Xiao et al., 2019; El Tabaa & El Tabaa, 2020; Machemer et al., 2022).

3.2.16. The components of personal norms

3.2.16.1. Moral obligation

Personal norms are based on an individual's sense of moral obligation to do the right thing. This sense of obligation is internalised and is not dependent on external factors (Xiao, Dunlap & Hong, 2019).

3.2.16.2. Values

Personal norms are influenced by an individual's values. For example, an individual who values environmental protection may feel a stronger sense of moral obligation to engage in pro-environmental behaviour identity (Chen, 2020; Hamm & Su, 2021).

3.2.16.3. Beliefs

Personal norms are also influenced by an individual's beliefs about the consequences of their actions. For example, an individual who believes that reducing their meat consumption will help preserve the earth may feel a stronger sense of moral obligation to decrease their meat consumption (Lee et al., 2022; Xiao et al., 2019).

3.2.16.4. Self-identity

Personal norms are also influenced by an individual's self-identity (Chen, 2020; Hamm & Su, 2021). For example, an individual who identifies as an environmentalist may feel a stronger sense of moral obligation to engage in pro-environmental behaviour. Research has shown that personal norms can have a positive impact on pro-environmental behaviour (Lee et al., 2022).

3.2.17. Studies that have used the VBN in the context of pro-environmental behaviour

VBN theory has been widely used to explain pro-environmental behaviour and has been found to be a useful framework for understanding the underlying factors that influence such behaviour. Here are some examples: A study conducted in Japan tested the VBN theory and found that values influence pro-environmental behaviour through pro-environmental beliefs and personal norms (Yuan, Ahmed Memon, Ali & Nawaz, 2022). Another study conducted in China extended and empirically tested the

VBN model to predict energy conservation behaviour among a Chinese sample (Wang, Zhang, Ding, & Wong, 2023). The study found that personal values and beliefs influence household energy conservation behaviour. These findings were in alignment with the findings of Liu, Watabe and Goto (2022) who integrated sustainability themes for enhancing interdisciplinarity on a case study of a comprehensive research in the University of Japan. The study found that personal values, and beliefs influence pro-environmental behaviour.

A study conducted in Mongolia tested the VBN theory and found that individuals' values drive beliefs and, in turn, norms which directly motivate individuals' pro-environmental behaviour (Liu, Zou & Wu, 2018). A study conducted in Iran adopted the VBN theory to investigate pro-environmental behaviour and its antecedents among Iranian university students (Chakraborty, 2019). The study found that personal norms have a significant impact on pro-environmental behaviour (Chakraborty, 2019). Onokala, Banwo and Okeowo (2018) conducted a study in the United States and extended the VBN theory by using social norms to predict pro-environmental behaviours. The study found that social norms predict each type of pro-environmental behaviour. These findings were also supported by a study conducted by Liobikienė and Poškus (2019), on the importance of environmental knowledge for private and public sphere pro-environmental behaviour.

3.2.18. Reason for the extensions of the VBN by other studies

The VBN theory has been extended and applied in various studies to predict and understand human behaviour in the context of environmental conservation and pro-environmental actions (Rezaei-Moghaddam, Vatankhah & Aji 2020; Chakraborty, 2019). The reason for extending the VBN theory is to better understand the complex factors that influence pro-environmental behaviour (Onokala, Banwo & Okeowo, 2018; Chakraborty, 2019). By including additional factors and considering different contexts, researchers can develop a more comprehensive understanding of pro-environmental behaviour and develop more effective interventions to promote such behaviour. The extended VBN theory has been utilised in diverse contexts, including workplace energy conservation, consumer behaviours, and pro-environmental actions in different

cultural and national settings (Rezaei-Moghaddam et al., 2020; Wynveen, Wynveen, & Sutton, 2015; Rezaei-Moghaddam, Vatankhah & Ajili, 2020).

3.2.19. Reason for the extensions of the VBN by this study

This study extended the VBN theory to better understand the complex factors that influence pro-environmental behaviour. By including additional factors, the researcher can develop a more comprehensive understanding of pro-environmental behaviour and develop more effective interventions to promote such behaviour. Moreover, the researcher aim to enhance the understanding of the psychological motivations and determinants that influence individuals' intentions and actions towards environmental protection and sustainability. The study aimed to investigate the role of anticipated pride in motivating pro-environmental behaviour. The VBN theory was integrated with the anticipated pride construct to better understand the relationship between emotions and pro-environmental behaviour. This integration suggests that anticipated pride can be a strong motivator for pro-environmental behaviour.

3.3. EMPIRICAL LITERATURE REVIEW

3.3.1. Altruistic values and new ecological paradigm

Numerous studies conducted over the past decade have attempted to define altruistic values as an ethical perspective or behaviour based on the idea of acting for the benefit of others or the environment rather than for oneself. These values are founded on the notion of caring for others and striving to better the lives of people around us, which often leads to a more fulfilling existence for all individuals. This concept of altruism is increasingly being utilised to direct conservation efforts in the context of new ecological paradigms (Xiao et al., 2021; Xu et al., 2021). Studies, including that of Xu, Li and Chi (2021) demonstrated how environmental altruism has been a way to explain why people are willing to make sacrifices for the environment even when they do not benefit personally. As a result, understanding the relationship between altruism and new ecological paradigms is critical for assuring the effectiveness of conservation activities.

Chua, Quoquab, Mohammad and Basiruddin (2018) explored the mediating role of the New Ecological Paradigm (NEP) between value orientations and pro-environmental personal norm in the agricultural context, in Asia. The results uncovered that the altruistic value positively and significantly affects NEP. It is also found that NEP positively and significantly affects the pro-environmental personal norm. Data also supported the links between altruistic value and pro-environmental personal norm (PPN).

Jaini, Quoquab, Mohammad, and Hussin (2020), in their study titled: "I buy green products, do you...? The moderating effect of eWOM on green purchase behaviour in Malaysian cosmetics industry", investigated the factors that affect green purchase behaviour in the context of cosmetics products purchase. Additionally, this study examined the moderating role of electronic word-of-mouth (eWOM) in influencing such green behaviour. The results revealed that altruistic values positively affects NEP, which eventually affect consumers' personal norms.

Chua, Quoquab, Mohammad and Basiruddin (2018) and Jaini, Quoquab, Mohammad, and Hussin (2020) found that altruistic values positively affect the NEP, which in turn affects pro-environmental personal norms (PPN). However, the studies differ in their focus and context. Chua et al. (2018) examined the mediating role of NEP between value orientations and PPN in the agricultural context in Asia, while Jaini et al. (2020) investigated the factors that affect green purchase behaviour in the Malaysian cosmetics industry, with a focus on the moderating role of electronic word-of-mouth (enwomb).

Despite the differences in focus and context, both studies suggest that altruistic values play a significant role in promoting pro-environmental behaviours and personal norms, and that the NEP mediates this relationship. These findings are consistent with previous research that has found a positive relationship between altruistic values and pro-environmental behaviours. Therefore, from the empirical literature provided, the researcher hypothesised that, ***H1: Altruistic values are significantly positively related to new ecological paradigm.***

3.3.2. Biospheric values and new ecological paradigm

Chua, Quoquab and Basiruddin (2016) conducted a study on the mediating role of NEP between value orientations and pro-environmental personal norm in the agricultural context to examine the relationships among value orientations, NEP and pro-environmental personal norm. Results revealed that biospheric values positively and significantly affect NEP. It was also found that NEP positively and significantly affects the pro-environmental personal norm. However, the relationship between biospheric values was not supported by the data. Additionally, it was found that NEP mediates the relationship between biospheric value and PPN (Chua, Quoquab & Basiruddin, 2016).

Suami, Wayan and Nadira and Neelaja (2019) conducted a study on the effects of knowledge about ecology, biospheric and egoistic values toward NEP. The purpose of this study was to find out whether the knowledge about ecology, biospheric and egoistic values have a direct effect toward NEP students. Among other findings, the study found that biospheric values have a positive direct effect on NEP students. Therefore, from the empirical literature provided the researcher with an opportunity to hypothesise that, ***H2: Biospheric values are significantly positively related to new ecological paradigm.***

3.3.4. Egoistic values and new ecological paradigm

Gansser and Reich (2023) analysed the importance of the NEP and environmental concerns (EC) as factors influencing attitudes toward sustainable behaviour in the context of the TPB. The aim of the study was to investigate the connection between attitude toward sustainable behaviour in relation to the environment and climate and the intention to change the behaviour regarding nature and environmental protection. The study further measured attitude on intention to change the behaviour regarding nature and environmental protection. Egoistic environmental concerns were found to play the greatest impact on attitude toward NEP. The results also showed that the egoistic view has the strongest influence on attitudes toward sustainable behavior related to the environment and climate.

Suama, Wayan, Nadiroh and Neolaka (2019) conducted research to find out whether the knowledge about ecology, biospheric and egoistic values have a direct effect toward NEP students. The path analysis noted that egoistic values have a negative effect on NEP. In addition, the study by Atlantis Press (2023) focused on the effects of knowledge about ecology, biospheric, and egoistic values on NEP. The study then found that egoistic values have a negative effect on NEP.

Jaini, Quoquab, Mohammad and Hussin (2020) conducted a study on the antecedents of green purchase behaviour of cosmetics products. The study aimed at exploring the factors that affect green purchase behaviour of Malaysian consumers in the context of cosmetics product purchase. More specifically, the objective of this study was to examine the effect of altruistic and hedonic values and the mediating effect of personal norm and pro-environmental belief toward green purchase behaviour. This study revealed that egoistic values positively affect NEP, which eventually affects consumers' personal norms. Therefore, from the empirical literature review provided, the researcher then hypothesised that, ***H3: Egoistic values are significantly positively related to new ecological paradigm.***

3.3.5. New ecological paradigm and awareness of consequences

The NEP was developed by Dunlap et al. (2000) to study the environmental attitude of individuals. The notion of NEP endorses the acceptance of the fact that human beings are part of nature. A human being can exist in harmony with or disturb the balance of nature; its existence outside of and interference with nature will harm the quality and health of nature, according to the authors (Bronfman et al., 2015). Asif, Nadeem and Ahsan (2023) investigated the effect of climate change belief and the new environmental paradigm on eco-tourism attitudes of tourists. The purpose of this study was to determine the effect of tourists' beliefs about climate change on the NEP and ecotourism attitudes. The study found that tourists' beliefs and awareness of consequences about climate change have a significant effect on the NEP and ecotourism attitudes.

Moreover, Fenitra, Premananto, Sedera, Abbas and Laila, (2022) conducted a study on environmentally responsible behaviour and Knowledge-Belief-Norm in the tourism context. Their research justified a causal relationship between the new environmental paradigm and awareness of its consequences. People with a greater understanding of current environmental issues would also have a greater awareness of the consequences of their actions and behaviours. In addition, Campos-Soria et al. (2018), Liobikien and Poškus (2019), and Delaroche (2020) claim that there is a correlation between the two, as well as a positive effect on an individual's awareness regarding the consequences of their actions. This study further found that a new environmental paradigm can increase a tourist's awareness of the consequences of their actions (Fenitra, Premananto, Sedera, Abbas & Laila, 2022). Therefore, from the empirical literature review provided, the researcher then hypothesised that, ***H4: New ecological paradigm is significantly positively related to awareness of consequences.***

3.3.6. Awareness of consequences and ascription of responsibility

Ascription of responsibility refers to an individual's understanding of what actions they should take to minimise or mitigate the negative cause of their impact and behaviour on the environment. It determines the acceptance of an individual of responsibility, which increases personal norms. It is also associated with an ascription of personal responsibility (Ghazali et al., 2019; Landon & Boley, 2018). Bronfman et al. (2015) and Ünal et al. (2018) examine this causal relationship. According to these two researchers, a person's awareness of the consequences of their actions has a positive impact on their ascription of responsibility. Their findings emphasise the positive effect of awareness of responsibility. Their findings emphasise the positive effect of a person's awareness of the consequences of their actions on their ascription of responsibility. These findings are supported by Ghazali et al. (2019), who asserts that awareness of the consequences positively influences the ascription of their responsibility among two nationalities (Malaysian and Chinese). Thus, this study indicates that tourists who are more aware of the consequences of their actions can improve their sense of responsibility. Individuals who are aware of the consequences of their behaviour and actions develop a stronger sense of responsibility. Therefore,

from the empirical literature review provided, the researcher then hypothesised that, ***H5: Awareness of consequences is significantly positively related to ascription of responsibility.***

3.3.7. Ascription of responsibility and personal norms

A stronger sense of ascription of personal responsibility in any individual evokes feelings of moral obligation. Ascription of responsibility is reflected in assigning responsibility for their behaviour or action (Ghazali et al., 2019). Studies emphasise that ascription of responsibility triggers personal norms (Steg & Nordlund, 2018). When a person feels that they did something wrong, their moral obligation to do something to stop or lessen the damage will go up (Ghazali et al., 2019; Yıldırım, 2019). This hypothesis has been supported in pro-environmental related studies. Ünal et al. (2018) revealed that when people acknowledge they can help reduce the negative consequences of their actions, they would feel morally obligated to support that particular behaviour. Likewise, Bronfman et al. (2015), followed by Rezvani et al. (2017), assert that a higher ascription of responsibility increases personal norms. Furthermore, recent evidence of conservation behaviour in an organisation (Ciocirlan, Gregory-Smith, Manika & Wells, 2020) and tourist behaviour (Kiatkawsin et al., 2020), demonstrated that responsibility ascription best predicts personal norms. Therefore, according to this study, a higher ascription of responsibility enhances personal norms.

Therefore, from the empirical literature review provided, the researcher then hypothesised that, ***H6: Ascription of responsibility is significantly positively related to personal norms.***

3.3.8. Personal norms and employee pro-environmental behaviour

Personal norms are defined by Schwartz (1977) as the moral obligation felt by individuals to practice appropriate action by engaging in a specific activity that corresponds to the unique context or state in which they are (Sörqvist & Langeborg, 2019; Hiratsuka et al., 2020; Wahid et al., 2022). Personal norms are an individual's personal commitment to their internalised ideals, where they feel responsible for engaging in a particular action (Han et al., 2019; Sörqvist & Langeborg, 2019). Yıldırım

and Semiz (2019) conducted a study in Turkey and attempted to predict PEB by merging TPB and VIP with a proposed model by using structural equation modeling (SEM). The study examined the superiority of current proposed theoretical model compared to the TPB and VIP. An indirect relationship between constructs in the proposed model was examined. The study found that personal norms are intended to cater to specific sorts of behavior, it must be activated before it can become relevant. This suggests that personal norm is a surrogate for an individual's intention and (pro-social or pro-environmental) behaviour (Yildirim & Semiz, 2019).

Hiratsuka et al. (2020), Han et al. (2019) and Liu et al., (2018) looked into the direct links between personal norms and an individual's contextual behavioural intention. Personal norm has been found to be a direct predictor of intention and behaviour in these studies. For example, personal norms were found to be a substantial predictor of consumers' sustainable water use (Han et al., 2019). Han et al. (2019) further argued that, the higher the level of an individual's moral obligation, the stronger his or her intentions are to engage in pro-environmental behaviour (Foster et al., 2022; Han et al., 2018; Han et al., 2019). Thus, personal norms strongly affect employee pro-environmental behaviour. Therefore, from the empirical literature review provided, the researcher then hypothesised that, ***H7: Personal norms are significantly positively related to employee pro-environmental behaviour.***

3.3.9. Anticipated pride moderates personal norm and employee pro-environmental behaviour

Ghazali, Nguyen, Mutum and Yap, (2019) explored six types of PEBs (i.e., activist, avoider, green consumer, green passenger, recycler and utility saver) and investigated their antecedents and interrelationships between two ethnic groups—Malays and Chinese in Malaysia. The study demonstrated that the level of anticipated pride plays a crucial role in influencing the connection between personal norms and employees' pro-environmental behaviour (Nguyen et al., 2018; Pristl, et al., 2020).

Moreover, Elert et al. (2019) investigated "The importance of environmental knowledge for private and public sphere pro-environmental behaviour: modifying the Value-Belief-Norm Theory in Lithuania". The study found that personal norms, and

organisational commitment, anticipated pride are significantly associated with pro-environmental behaviour in the workplace (Nguyen et al., 2018; Elert et al., 2019; Pasca, 2022). Additionally, the study pointed out that the relationship between anticipated pride and pro-environmental behaviour was stronger than the relationship between personal norms and pro-environmental behaviour (Leung & Rosenthal, 2019; Leung, & Rosenthal, 2019; Shipley, van Riper, Stewart, Chu, Stedman & Dolcos, 2023).

Shipley, van Riper, Stewart, Chu, Stedman and Dolcos (2023) also explored the relationship between anticipated pride and pro-environmental behaviour, with positive results. This study disentangled the empirical relationships between concepts of place and the emotions of pride and guilt to understand how they collectively contributed to individuals' decisions about environmental sustainability, in Midwestern U.S. This study found that pride, and guilt are positively correlated with pro-environmental behaviour. These findings underline the importance of incorporating strategies that boost employees' level of anticipated pride, as this can increase their pro-environmental behaviour. Therefore, from the empirical literature review provided, the researcher then hypothesised that, ***H8: Anticipated pride moderates the relationship between personal norms and employee pro-environmental behaviour.***

3.3.10. Personal norm mediates social norms and pro-environmental behaviour

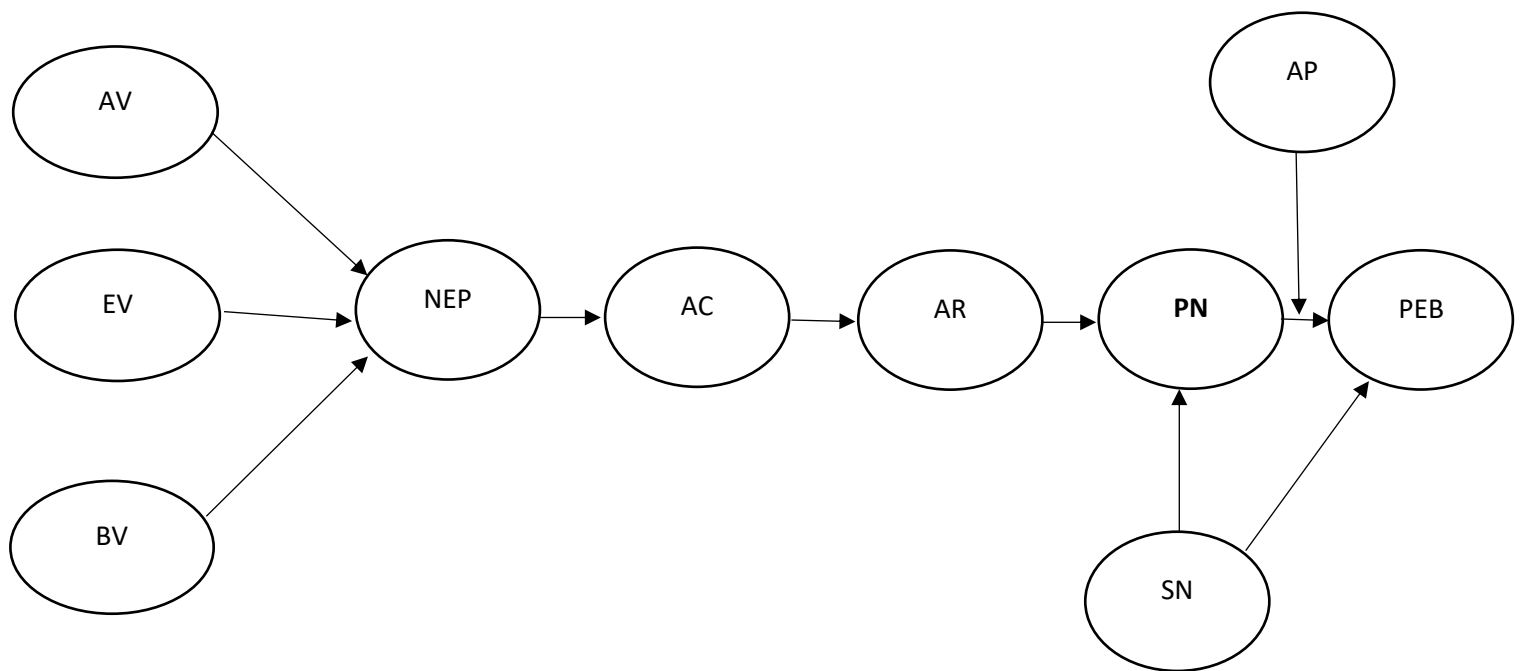
Personal norms have been studied extensively as a key factor in pro-environmental behaviour (Shipley et al., 2023; wang & Zhang, 2020; Nguyen et al., 2018). This literature review focused on the role of personal norms in mediating the influence of social norms in shaping pro-environmental behaviour. De Groot (2020) and Han (2022), in their studies, conducted a survey to measure, among other variables, pro-environmental intentions, social norms, and personal norms. Results showed that the effect of social norms on pro-environmental intentions was partially mediated by personal norms effect of social norms on pro-environmental behaviour was partially mediated by personal norms (Groot, 2021; Nguyen et al., 2018; Han, 2020).

Moreover, Van der Werff et al. (2015) and Kim (2019) investigated the mediating role of personal norms in the influence of social norms on pro-environmental behaviour. The authors used a survey to measure pro-environmental behaviour, social norms, and personal norms. Results showed that the effect of social norms on pro-environmental behaviour was partially mediated by personal norms (Groot, 2021; Han, 2020; Van der Werff et al., 2015; Kim, 2019).

These studies demonstrate that personal norms play an important role in mediating the influence of social norms on pro-environmental behaviour. Specifically, personal norms can serve as a bridge between social norms and behaviour by allowing individuals to internalise social norms and make them their own (Pradhananga & Davenport, 2022; Karimi & Mohammadimehr, 2022; Cao, Liu, Zhang & Shang, 2022).

This study argues that an individual's personal norm is linked to individual's internal self in line with their internal values and the concepts of right and wrong, or good and bad. Personal norm is proven to be activated by awareness of consequences and ascription of responsibility (Kim, 2019; Cao, Liu, Zhang & Shang, 2022). Active personal norm will lead to affect behaviour, with or without being preceded by intention (Pradhananga & Davenport, 2022; Karimi & Mohammadimehr, 2022; Cao et al., 2022). Awareness of consequences and ascription of responsibility significantly form a personal norm as a core factor of the norm activation theory. Therefore, from the empirical literature review provided, the researcher then hypothesised that, ***H9: The relationship between social norms and employee pro-environmental behaviour is mediated by personal norms.*** Figure 3.4 illustrates the conceptual framework of the study.

Figure 3.4: Conceptual framework



Source: author's conceptualisation

AV= Altruistic values; EV= Egoistic values, BV=Biospheric values, NEP= new ecological paradigm; AC= awareness of consequences, AR= ascription of responsibility; PN= personal norm, SN = social norm; AP= anticipated pride; PEB= pro environmental behaviour.

The original VBN Theory proposes that an individual's environmental values, beliefs about consequences, and personal norms influence their environmental behaviour. In this study, the theory was extended by social norms and anticipated pride to further acknowledge the impact of social influences and emotional factors on pro-environmental behaviour. This framework provided a comprehensive understanding of the psychological determinants of environmental behaviour, incorporating both individual and social aspects.

3.4. SUMMARY

The first section in this chapter discussed the theoretical literature, which comprised the theories used to guide this study by looking at it from the perspective of TPB, NAT, and the VBN theory. The key components discussed are awareness of consequences, ascription of responsibilities, and employee pro-environmental behaviour. This is the part that extended the VBN theory with social factor (social norms) and a personal factor (anticipated pride). Moreover, it explored the practical literature to develop a deeper connection between the determinants of employee pro-environmental behaviour and the VBN Theory. The second section of this chapter discussed the empirical literature. The research hypothesis were tested by various literatures and the empirical literature on the relationship between social norms and pro-environmental behaviour is reviewed, with the mediation effect of personal norms.

The next chapter explained the research methodology use in the study.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1 INTRODUCTION

The goal of this chapter is to explain the research methodology that was used in the study. The term “research methodology” refers to the overall approach of the research process that begins with the theoretical base for data collection and analysis. The methodology for this study was organised in seven steps. The first step was to outline the research definition. In the second step, the researcher elucidated the qualitative, quantitative, descriptive, explanatory, and casual research designs. The design type chosen for the research study was also highlighted.

The third step covered primary data collection, which included experiments, surveys, and observations. The data collection tool for the project was described. In the fourth step, the sampling methods for the study were discussed. The fifth phase provided an overview of how the data for the study were collected. Step six discussed the data analysis methodologies and the motivation for the chosen research. The final step discussed how the study results would be presented.

Therefore, this chapter elucidated the research methodology of the study, including all of the sections covered in this chapter. Research is a method of gathering information from a series of questions that is methodical and organised. The first section outlined the research definition.

4.2 RESEARCH DEFINITION

Research is a systematic endeavour by academics to answer problems by analysing and interpreting information (Kadic, Kovacevic & Runjic, 2020). The word research has two consonants. “Re” denotes “again,” whereas “search” indicates “test, and try thoroughly.” A research study could be an inquiry of an old issue that is being investigated, or it could be a new exploration (Kadic et al., 2020). By analysing and interpreting data, researchers can solve issues and gain new insight on the issues under study (Busetto, Wick & Gumbinger, 2020). Research is a method of solving

issues and gaining new insights by analysing and evaluating data (Kelley, 2022). The purpose of this study was to look at the predisposing variables that influence pro-environmental behaviour among employees in particular industry and geographic settings. The researcher conducted a systematic process of research to offer new insights and potentially address problems with environmental sustainability within the hospitality sector in the designated areas by gathering and evaluating data about the attitudes, beliefs, and organisational factors that may influence employee behaviour. Thus, by rigorously analysing and evaluating appropriate data to try to understand and possibly address a particular problem, this study precisely represented the core of research.

This section discussed the research methods used in this study. It detailed the steps used by the researcher to fulfil the task. This study's methodology consisted of seven steps in total. The first step described the problem, research objectives, and research hypotheses. The second step described several research designs, such as qualitative, quantitative, descriptive, explanatory, and incidental research designs. The chosen research design was highlighted. The third step included primary data collection, which included observation, survey, and experiment. The data collection tool that was chosen was accounted for. The sample methodologies used in the study were discussed in the fourth step. A synopsis of the data collection procedure for the study was provided in step five. Step six focused on data analysis procedures and the rationale for the chosen research. The final step was to plan how the research findings would be presented. The discussions that follow were based on an overview of the problem statement.

4.3. RESEARCH OBJECTIVES

This study was based on the following objectives:

- To investigate the relationship between values (altruistic values, Biospheric values, and egoistic values) and new ecological paradigm.

- To determine the relationship between the new ecological paradigm and an awareness of consequences.
- To examine the relationship between an awareness of consequences and an ascription of responsibility.
- To determine the relationship between an ascription of responsibility and personal norms.
- To examine the relationship between personal norms and employee pro-environmental behaviour.
- To determine if anticipated pride moderates the relationship between personal norms and employee pro-environmental behaviour.
- To investigate if personal norms mediate the relationship between social norms and pro-environmental behaviour.

4.4. RESEARCH HYPOTHESES

4.4.1. Primary hypotheses

H1: Altruistic values are significantly positively related to the new ecological paradigm.

H2: Biospheric values are significantly positively related to the new ecological paradigm.

H3: Egoistic values are significantly positively related to the new ecological paradigm.

H4: The new ecological paradigm is significantly positively related to an awareness of consequences.

H5: An awareness of consequences is significantly positively related to an ascription of responsibility.

H6: An ascription of responsibility is significantly positively related to the personal norm.

H7: The personal norm is significantly positively related to employee pro-environmental behaviour.

4.4.2. Secondary hypotheses (moderating effect of anticipated pride)

Anticipated pride moderates the relationship between personal norm and employee pro-environmental behaviour.

4.4.3. Secondary hypotheses (mediating effect of personal norm)

H9: The relationship between social norms and employee pro-environmental behaviour is mediated by personal norms.

4.5 RESEARCH PHILOSOPHY AND APPROACH

4.5.1 Research Philosophy

Different research philosophies determine the nature of the study. These philosophies include interpretivism, positivism, pragmatism, and realism experiences (Žukauskas, Vveinhardt & Andriukaitienė, 2018). The authors further state that interpretivism arose as a subjectivist critique of positivism, emphasising that humans differ from physical phenomena in a manner that they generate meaning. Vasileiou, Barnett, Thorpe and Young (2018) add that positivism includes working with observation to social reality to generate factual and accurate information. Herbert (2022) says positivists believe that experiments and observations provide precise knowledge. The pragmatist philosophy maintains that human knowledge is developed publicly and that public contractions are established by people's experiences (Žukauskas et al., 2018). Pragmatists believe that people's attitudes and beliefs are shaped by their social experiences. The emphasis of realism is on accepting what we feel and see on the basis of fundamental reality structures that influence observable occurrences. According to Haigh, Kemp, Bazeley and Haigh (2019), 'critical realism' is based on the truth of existing nature, which humans analyse to construct local ideas and judgments based on their knowledge (Vasileiou et al., 2018). The philosophy used in this study was positivism (Ryan & Gemma, 2018; Vasileiou et al., 2018). Positivism was ideal for this research since the researcher gathered material and then analysed it to draw conclusions based on accurate and factual data (Ryan & Gemma, 2018; Park et al., 2018; Konge et al., 2019).

4.5.2 Research Approach

Research approach refers to the method used in this study to collect data, analyse it, and interpret the results. The research approach is the plan that guides the study (Mohajan, 2018; HR & Aithal, 2022; Rambaree, 2018; Pietsch, 2021). There are two major types of research approaches: deductivism and inductivism (Haig & Haig, 2018; George, 2019). The inductive approach is concerned with the development of a new theory, whereas the deductive approach is concerned with the examination of an existing theory (Haig & Haig, 2018; Osman, Mohammad, Abu, Mokhtar, Ahmad, Ismail & Jambari, 2018; George, 2019).

The researcher broadens the hypothesis by considering the factual observation. The researcher develops assumptions by assuming the hypothesis of a specific idea and afterwards proves the premise by analysing the hypothesis and validating it with the verifiable theory. This study adopted a deductive approach because the Value Belief Norm (VBN) Theory was used in this study, hypotheses were constructed and empirically tested using a deductive approach.

4.6 RESEARCH DESIGN

A research design can be defined as a procedure for gathering and evaluating information for a study (Mohajan, 2018). A research design is a strategy for acquiring, measuring, and analysing information based on the investigation's research questions (Mohajan, 2018; HR & Aithal, 2022; Rambaree, 2018). Furthermore, research design is a blueprint for how the researcher intends to carry out the study endeavour. A research design is a concept in research that is defined by a study problem, objectives, and questions (Pietsch, 2021; Rambaree, 2018; George, 2019). Furthermore, a research design is a plan for carrying out the research project, and it specifies the technique for gathering data that will be used to solve the research problem (Haig & Haig, 2018; Rambaree, 2018). This procedure or process entails what the researcher will perform from developing the study hypotheses to their consequences on the evaluation of the information collected. A 'research design' is essential since it

supports the researcher in following the proper methods and procedures when conducting research (Mohajan, 2018).

4.6.1 Types of research designs

The research design can use one of three methodologies: qualitative, quantitative, or mixed methods. The nature of the research, potential limits, setting, and paradigms that govern the study endeavour all have an impact on the research design (Mohamed, & Metwally, 2019; Pietsch, 2021).

4.6.1.1 Qualitative research

Qualitative research involves qualities that cannot be readily analysed as statistical and quantitative data (Hennink, Hutter & Bailey, 2020). Unstructured data collection methods are often used in qualitative research (Cooper & Schindler, 2011), and it is effective in examining the depth of new developments and assisting in completely describing and managing those developments (Hennan et al., 2020). The qualitative method emphasises the identification and comprehension of people designated to a social problem, with the data collected and analysed in non-numerical terms (Flick, 2018).

4.6.1.2 Quantitative research

Quantitative research is used to acquire, analyse, and apply data using mathematical methodologies that put emphasis on surveys and numerical data collection (Ryan & Gemma, 2018). Further, quantitative research uses survey methods such as questionnaires, telephonic interviews, and face-to-face interviews to collect data from respondents and statistically transfer it for analysis (Ryan & Gemma, 2018). The quantitative approach is regarded to be the deductive approach to research. This method is distinguished by a theory that can be used to examine the hypothesis (Žukauskas et al., 2018). Furthermore, hypotheses are evaluated, and conclusions are drawn as a result of hypotheses.

The aspects of quantitative research include the study of relationships between variables and the examination of research methods and objective. Quantitative research is often used in reference to numbers or units (Ryan & Gemma, 2018). The information that is collected during a particular study is quantified or quantitatively

recorded; as a result, the information is regarded as statistical data. Quantitative research is regarded as the best research method, particularly when sampling large numbers of results and generating generalisations, and it leads to the collection of data and the investigation of correlations between variables (Haigh, Kemp, Bazeley & Haigh, 2019). These outcomes can be quantified. A quantitative research design was used in the investigation. This strategy entails collecting primary data samples to project results onto a larger population. This method was chosen because it collects information through the use of numerical data, which can then be used to explain and discover relationships between variables (Vasileiou et al., 2018). The approach can also be used to investigate cause-and-effect relationships (Žukauskas et al. 2018). Quantitative research allowed the study to make use of statistical tests to analyse the results. The quantitative approach is commonly used as a method to measure the relationship between variables. The study used the quantitative research approach.

4.6.1.3 Mixed methods

A mixed method combines qualitative and quantitative data collection and analysis in a comparable or sequential manner (Almeida, 2018). During data collection and analysis, this strategy gives dynamic opportunities for researchers to uncover new ways of achieving outcomes (Palinkas, Mendon & Hamilton, 2019). The process of 'mixed methods research' entails gathering and analysing both quantitative and qualitative data (Flynn, & Korcuska, 2018). The term 'mixed method approach' refers to a methodology that applies both a quantitative and a qualitative approach to acquiring and evaluating data (Flynn, & Korcuska, 2018). This indicates that it is a methodology that uses simultaneous approaches while combining data (words and numbers) and tools (interpretations and statistics) (Flynn & Korcuska, 2018). When employing both quantitative and qualitative research methodologies, a researcher uses mixed methods. Moreover, it helps researchers expand and advance their work plans since researchers utilise this strategy to identify obstacles, create answers, and answer issues that cannot be answered using a single methodology. The mixed technique produces more accurate and enhanced results (Flynn & Korcuska, 2018).

4.7. RESEARCH AREA

This study concentrated on Small, Medium, and Micro Enterprises (SMMEs), precisely small hotels, in two district municipalities in Limpopo Province, specifically Capricorn and Waterberg District Municipalities. The reason for this focus was because there is a sufficient number of small hotels in the two municipalities. This provided the researcher with the necessary data to carry out the research. Capricorn District Municipality encompasses four local municipalities: Blouberg, Lepelle-Nkumpi, Molemole, and Polokwane, which is the economic hub of Limpopo Province and home to numerous SMMEs (Capricorn District Municipality, 2021). Polokwane is the economic heartland of the Limpopo Province, and many small hotels are located in the four local municipalities (Capricorn District Municipality, 2021). Waterberg District Municipality comprises five local municipalities: Bela-Bela, Lephalale, Modimolle-Mookgophong, Mogalakwena, and Thabazimbi, with a high presence of small hospitality firms (Waterberg District Municipality, 2020, 2021). The selected municipalities offered a diverse range of small hospitality firms, providing a rich source of data for the researcher to conduct the study.

4.8. POPULATION AND SAMPLING

4.8.1. Population

A population is a collection of people who share certain trait, which could be the same gender, educational level, same residence area, same ethnic identity, same experience of phenomena, etc. According to Majid (2018), the study's focus is the population, which includes all the individuals, groups, and organisations. A population is a collection of individuals belonging to the same groups who reside in the same area (Weeks, 2020). The study's intended target demographic was the area of interest that the study concentrated on (Abernethy & Hardin, 2018). The population of the study is employees working for small hospitality firms (micro 0-10 employees), small (11-50 employees) and medium (51-250 employees) in the Capricorn and the Waterberg district municipalities in the Limpopo Province. There is no population list or sampling frame of employees of hospitality firms in the study area. However, the participating

hospitality firms were chosen from the websites of Tourism Grading Council of South Africa and TripAdvisor.

4.8.2. Sampling

Sampling is the process of choosing a subset of the population for a research study with the aim of predicting the population (Aithal, 2022). The procedure involves selecting the appropriate objects, events, or individuals to serve as the representative of the entire population (Hanif, Shahbaz, & Ahmad, 2018). Hanif, Shahbaz and Ahmad (2018) further define sampling as the process of selecting a representative sample of the study's population. Furthermore, Dhondt, Croubels, De Cock, Dhont, De Baere, De Paepe and Devreese (2021) add that sample is a fraction of the population that represents the characteristics of that population. Without the use of sampling, it would have been expensive and time-consuming for the researcher in this study to watch every relevant occurrence or every relevant person in the community, sampling allows the researcher to generalise about the entire population.

4.8.2.1. Probability sampling

Probability sampling is a technique of assuring that each individual in a population has a known non-zero chance of being chosen (Lamm & Lamm, 2019). There are four different kinds of probability samples. "Stratified, systematic, simple random, and cluster sampling" are among them. Most populations can be separated into mutually exclusive strata or subpopulations using stratified sampling (Yang et al., 2020). Stratified sampling is the process of creating a sample that includes elements from each section (Scholtz, 2021). The main advantage of stratified sampling is that it provides data that may be utilised to analyse and represent subgroups. The main disadvantage is that it leads to inaccuracy, resulting in subgroups that are chosen at various rates, and it is time consuming (Stratton, 2021).

Systematic sampling is used to sample every Kth element in the population, beginning with a random element number between 1 and k (Singh & Rai, 2019). Systematic sampling begins by selecting one element at random from the population, and then selects every Kth element in the order of the sample proportion (Elkhoury, Felker, Kwan, Sisk, Delfin, Natarajan & Marks, 2019). The main advantage is that the sample

mean, or fraction of the distribution is simple to construct and deduce. The disadvantage of this sampling strategy is that the sample and results may be biased because of the periodicity of the population (Xu & Goodacre, 2018).

When utilising simple random sampling, each member of the population has the same chance of being included in the sample (Singh & Rai, 2019). Cluster sampling involves splitting the population into collectively exhaustive and mutually exclusive subgroups or clusters, and then selecting clusters for inclusion in the sample (Jang, Min, Moon, Mohaisen & Nyang, 2020). Cluster sampling has the advantage of being both inexpensive and straightforward (Jang et al., 2020).

5.8.2.2 non-probability sampling

Non-probability sampling refers to a method where population members have no possibility of being chosen or where it is unknown how likely they are to be (Lamm & Lamm, 2019; Buelens, Burger & van den Brakel, 2018; Bae, Park & Jeon, 2022). In a descriptive study, non-probability sampling, which includes snowball, convenience, and quota sampling, is typically used (Buelens, Burger & van den Brakel, 2018). The procedure of selecting participants based on recommendations given by others is known as snowball sampling (Yang, Kim & Song, 2020). This indicates that researchers have a basic concept of the individuals they want to use in their study. As a result, they employ these volunteers to find more people to participate in the study. The referrals of other respondents may be based on what they like in others; this may be due to particular attributes, which is why this method is thought to be biased.

According to the definition of convenience sampling by Buelens et al. (2018); Yang, Kim and Song (2020), this type of sampling is one in which the target group is selected using a precise criterion that permits respondents to participate in the study's specific aim. Because the researcher can collect information at any time due to proximity to the targeted elements and availability, convenience sampling is regarded as incidental sampling. Convenience sampling is also less expensive and simpler to utilise than other sample techniques (Stratton, 2021; Krupnikov, Nam, Style, Druckman & Green, 2021; Scholtz, 2021). Convenience sampling has the advantages of being quick,

accurate, and affordable but has the disadvantage that the population cannot be generalized (Yang et al., 2020; Scholtz, 2021).

In quota sampling, researchers divide a population into subgroups based on known characteristics or traits, such as age, gender, education level, and income (Zhang, Mildemberger, Howe, Marlon, Rosenthal & Leiserowitz, 2020; Iliyasu & Etikan, 2021; Ochoa & Porcar, 2018). Quota sampling aims to produce a sample that contains strata (groups) proportionate to the population under study (Bhardwaj, 2019; Smith & Dawber, 2019; Jach, 2021; Ochoa & Porcar, 2018). To establish a sample with a similar distribution of features, quota sampling is a method of selecting respondents based on the similar categories or characteristics they represent. There are two varieties of quota sampling: controllable and uncontrollable study (Bhardwaj, 2019; Smith & Dawber, 2019; Jach, 2021; Ochoa & Porcar, 2018). In controlled sampling, the researcher has fewer options for choosing individuals based on their convenience study (Bhardwaj, 2019; Smith & Dawber, 2019; Jach, 2021; Ochoa & Porcar, 2018). On the other hand, the researcher is free to select respondents based on convenience while using uncontrollable quota sampling.

This study used non-probability sampling, precisely the convenience sampling method. This is because a population or sampling frame of employees of hospitality firms was not available for this study. Convenience sampling, according to Cooper and Schindler (2018), is a non-probability approach of collecting samples by taking samples that are conveniently accessible around a location.

4.8.3. Sampling Size

Sample size refers to the number of observations or individuals included in a study or experiment, and it is a crucial consideration in research as it directly impacts the reliability of the results (Lester, Cho & Lochmiller, 2020). According to Hair, Risher, Sarsstedt and Ringle (2019), when testing a model using PLS SEM, the minimum sample size should be greater than 10 times the maximum number of inner or outer model links pointing at any latent variable in the model. The number of items used to measure the constructs are thirty-seven. Therefore, based on the requirement that the

minimum sample size should be greater than 10 times the maximum number of inner or outer model links pointing at any latent variable in the model, the sample size of the study was three hundred and seventy employees. However, a minimum of seven hundred questionnaires was distributed to employees because of the anticipated non-response. The above discussion was based on population and sampling used in this study. The next discussion will be based on data analysis.

4.9 DATA COLLECTION

According to researchers Herington, Li, and Pisani (2024), primary data refers to information collected directly by a researcher for a specific study. This type of data is unique and original, directly relevant to the research question, and has not been previously published or manipulated. Primary data is considered more valid and reliable since it hasn't undergone any alterations or human bias. The three main methods for collecting primary data are observation, experimentation, and surveys (Parashakti, Perkasa, Aprillita, Elvaresia, and Rizky, 2024). The following are primary data collection methods:

4.9.1 Observation

Observation is a data collection method where researchers or machines gather primary data on human behavior, objects, or events without direct questioning (Suardi, Telaumbanua & Isma, 2024). While this approach involves some subjectivity, as observers must interpret the data, it can provide reliable information in certain contexts (Parashakti et al., 2024). For instance, observing and recording the number of people in a restaurant at a specific time is a relatively objective measure, as long as the observer is accurate (Adams, Evans & Peek, 2024). However, when observations require subjective judgments, such as identifying millennials in a restaurant, the risk of bias increases (Sileyew, 2019; Coe, et al., 2021). Nevertheless, observation offers unique insights into dynamic situations that may not be captured through other methods (Wittig & Boesch, 2019). Additionally, observation can be combined with other data sources, like video recordings, to enhance its value (Suardi, et al., 2024).

4.7.2 Experiment

An experiment is a type of data collection method where you, as a researcher, change some variables and observe how they affect other variables (Sgvri, Gulys & Koltai, 2021). The variables you manipulate are said to be independent, while the variables that change as a result of manipulation are dependent (Szinayet al., 2021). According to Fellows and Liu (2021), the main advantage of doing an experiment is the ability to investigate causal linkages, which is not possible with an observational research. Additionally, experimental research may be used to a variety of disciplines, including sociology, psychology, agriculture and medical research (Szinayet al., 2021). However, an experiment has the drawbacks of being costly and time-consuming (Szinayet al., 2021). The following discussion will be based on survey and how different methods of survey can be used in a research study.

4.7.3 Survey

A survey is a research tool used to gather information about individuals' opinions, beliefs, feelings, characteristics, needs, and behaviors (Jain, 2021). It involves asking participants questions and analyzing their responses once the survey is completed (Kabir, 2016). In this study, the survey research method was chosen because it was the most suitable approach to achieve the research objectives, as other methods were deemed insufficient (Nu Vu et al., 2024). The survey method offers several advantages, including cost-effectiveness, time efficiency, and reliability in analyzing population data (Nu Vu, Hoang, Lindholm, Sahlen, Nguyen & Sun, 2024). However, the researcher must decide on the appropriate observation method to conduct the study, which involves selecting either a cross-sectional or longitudinal study design (Rashid et al., 2021). According to Cvetković-Vega, Maguiña, Soto, Lama-Valdivia and Correa-López (2021), the study setting is not changed by the researcher as they collect data on their subjects. The distinguishing characteristic a cross-sectional study is its ability to compare various demographic groupings at a particular point in time (Wang & Cheng, 2020). A cross-sectional study design has the advantage of enabling researchers to compare numerous factors at once (Nu Vu et al., 2024).

Similar to cross-sectional studies, longitudinal studies are observational, with researchers respecting participants' privacy (Huque et al., 2018). Palgi-Hacker, Sacks, and Landry (2024) note that longitudinal studies involve repeated observations of the same themes over an extended period, often spanning several years. This design enables researchers to track changes and developments in target populations at both group and individual levels (Maghalian, Nikanfar, Nabighadim & Mirghafourvand, 2024). Longitudinal studies have the distinct advantage of covering an extended period, allowing for the creation of timelines, unlike cross-sectional studies which capture only a single moment (Deppermann & Pekarek Doehler, 2021). The research question should guide the choice of design (Tănase, Bojoga, Crăciunescu, Pop, Novac, Negruțiu, & Timar, 2024)

The most suitable research design may emerge as the study progresses. While longitudinal studies offer valuable insights, cross-sectional designs can be completed more efficiently and swiftly (Swider, Yang & Wang, 2024). Tan, Barbosa, Pinho, Assefa, Keinert, Hanlon, Barrett, Dregan, Su, Mohan, and Ferri, (2024) suggest a sequential approach, starting with cross-sectional research to identify correlations and relationships, followed by longitudinal studies to investigate causality. This study employed a cross-sectional design due to its affordability and time-effectiveness (Petersen, Apfelbaum and McMurray, 2024), providing a rapid, straightforward, and cost-effective method for data collection (Petersen et al., 2024). Petersen et al., (2024) highlights the ease and affordability of cross-sectional studies, which can be conducted using various methods like personal interviews, telephone surveys, mail surveys, self-administered surveys, and computer-assisted surveys, enabling researchers to gather a substantial amount of data quickly. The next section will explore the various methods used in survey research.

4.7.3.1 Various methods of conducting surveys

According to Stefes (2024), survey research methods include in-person interviews, telephone surveys, written surveys, online surveys, and self-administered surveys. Face-to-face interviews (1) are considered a highly effective method for collecting data, as respondents are more likely to trust the surveyor and provide candid feedback

(Antoun & Presser, 2024). This approach enables researchers to promptly detect respondents' discomfort when discussing sensitive topics (Mukhopadhyay et al., 2019). In contrast, telephone surveys (2) offer a cost-effective alternative to in-person surveys, requiring significantly less investment (Gorfinkel, Stohl, Shmulewitz, and Hasin, 2024).

The cost of telephone surveys can be comparable to or slightly higher than internet surveys, depending on the scope of the research (Antoun & Presser, 2024). According to Gorfinkel et al. (2024), telephone surveys offer a more efficient and less labor-intensive approach to data collection compared to in-person interviews. When interviewers are collocated, they can verify their questions to ensure accuracy and consistency (Antoun & Presser, 2024). However, a significant limitation of telephone surveys is the difficulty in establishing a rapport with respondents due to the medium's barrier (Olson & Smyth, 2021), which may lead to respondents opting for anonymity and questioning the researcher's credibility. (3) Mail surveys are another commonly used survey method (Antoun & Presser, 2024), utilizing traditional pen-and-paper data collection, which is particularly useful in areas where digital devices are inaccessible (Williams et al., 2018).

According to Wilson, Brooks, Edwards, Deaver, Surd, Pirlo, Byrd, Meyer, Beresheim, Cuskey, and Tsintolas, (2024). online surveys enhance the quantity and quality of responses in field research data collection. (4) Neuert (2024) notes that online surveys are the most cost-effective method with the widest reach, outperforming other techniques in terms of scope (Wilson et al., 2024). Researchers often prefer online surveys over traditional in-person or telephone surveys when collecting data from a large sample size (Zarouali, Araujo, Ohme, & de Vreese, 2024). (5) A self-administered survey is a data collection method where the researcher is absent, providing participants with surveys and instructions, and allowing them to complete the survey independently (Morselli et al., 2019). As Wilson et al., (2024) put it, the researcher delivers the survey and waits for responses. Self-administered surveys typically include open-ended questions, enabling respondents to share their thoughts comprehensively and without limitations (Zarouali et al., 2024).

Self-administered surveys include popular methods like mail-in questionnaires and online questionnaires distributed via email invitations (Zarouali et al., 2024). In this study, a self-administered survey and questionnaire were used to collect data from respondents. A questionnaire is a systematic series of questions designed to gather data from respondents (Kim et al., 2021). Open-ended questionnaires, which are pre-coded and standardized, are sometimes used to collect data from respondents who record their answers (Zarouali et al., 2024). The researcher employed a questionnaire to ensure comparability of data from different respondents (Zarouali et al., 2024). Additionally, questionnaire responses can be easily coded, facilitating data processing (Nanes & Haim, 2021). Questionnaires also offer a time- and cost-effective solution (Abu-Alhaija, 2019). The researcher personally distributed the questionnaires to respondents, who completed them independently. Thus, the self-administered method was used for data collection. The data collection process followed this process. The managers and owners of the identified firms were contacted through a combination of personal meetings, telephone calls and emails to inform them about the aim of the study and to request for their participation in the survey. The number of employees of the firms was obtained at this stage. The identification of the number of employees allowed the researcher to classify the firm into micro (0-10 employees), small (11-50 employees) and medium (51-250) employees in line with the National Small Business Amendment Act (Government Gazette, 2019). After the approval to collect data by the owner/manager of identified hospitality firms, employees were contacted. A permission letter and a consent form were given to each conveniently selected participant during actual data collection and the questionnaire administered. Each participant was given two weeks to complete the questionnaire, and their emails and phone numbers were obtained at this stage. Survey participants were regularly reminded through telephone calls to complete the questionnaires. The next section focused on secondary data collection methods.

4.8 SECONDARY DATA COLLECTION METHODS

Secondary data refers to data previously collected by other researchers (Wilson et al., 2024), allowing researchers to build upon existing studies and enhance research efficiency (Johhson & Sylvia, 2018). This approach is considered faster and more cost-effective (Nanes & Haim, 2021). Examples of secondary data collection methods include government reports, journals, newspapers, books, and published sources (Wilson et al., 2024). In this study, secondary data were obtained from various sources such as dissertations, theses, articles, journals, and books relevant to the research topic (Nanes & Haim, 2021). This concludes the discussion on secondary data collection methods. The next section will focus on the design and content of questionnaires.

4.9 QUESTIONNAIRE DESIGN AND CONTENT

4.9.1 Questionnaire

The researcher employed a questionnaire as the primary data collection tool (Willis, 2015). A questionnaire is a comprehensive list of printed questions that respondents complete, providing their personal opinions and perspectives (Lester et al., 2020). This research instrument enables data collection in a standardized format, ensuring internal reliability and clarity for analysis (Szinayet al., 2021). A questionnaire can also be defined as a research tool comprising a series of questions designed to gather data from respondents (Fellows and Liu, 2021). It serves as a vehicle for collecting information for analysis purposes (Abu-Alhaija, 2019). A questionnaire consists of questions that participants answer by providing facts, opinions, or preferences. Surveys can be conducted via telephone, in-person, or online via email (Lester et al., 2020)

4.9.2. Survey Questions

Survey questions can be categorized into two types: open-ended and closed-ended (Edgar et al., 2016). Open-ended questions allow respondents to freely express their thoughts and answers without any constraints (Abu-Alhaija, 2019). These questions don't have fixed answers, enabling participants to respond with their unique

perspectives (Mohajan, 2018). Open-ended questions provide accurate and insightful answers, including unexpected suggestions (Kabir, 2016). As Bernstein (2017) notes, open-ended questions allow respondents to answer in their own words without being limited by predetermined options. In contrast, closed-ended questions offer a fixed set of answers for respondents to choose from, limiting their ability to express their opinions further. However, closed-ended questions are easy to design and code, making them ideal for pre-analysis (Mohajan, 2018; Kabir, 2016). When constructing the questionnaire, the researcher adhered to theoretical measures for each construct.

4.10 PILOT STUDY (PRE-TESTING)

A pilot study, as defined by Kumar and Sharma (2024), is a small-scale experiment conducted prior to a larger research project, involving a select group of participants. The primary objective of a pilot study, according to Singh and Singh (2024), is to estimate the duration of the intended research and identify potential issues that may arise during the larger study (Mohaddesi & Hartevel, 2020). Pilot studies enable researchers to test and evaluate data collection and analysis techniques (Tekola et al., 2020), address methodological queries, and refine the research plan to ensure appropriate methodologies are used (Teoh et al., 2020). They also assess the feasibility of the research process (Teoh et al., 2020) and allow researchers to address problems before conducting the larger study (Koch & Brich, 2020). In this study, the questionnaire was pre-tested with twenty employees working with four small hospitality firms and the researcher self-administered the questionnaire. The respondents did not participate in the final study (Fraser et al., 2018). The researcher was satisfied with the questionnaire's design and the accuracy of the collected data (Koch & Brich, 2020). Pre-testing the questionnaire, as suggested by Perry and Daniels (2024), enables researchers to analyze proposed statistical and analytical processes, assess their applicability to the data, and adjust data collection procedures, accordingly, leading to more effective data analysis in the primary study.

4.10. DATA ANALYSIS

Data analysis is the process of modelling and analysing evaluations and computations to separate important information from acquired data (Chambers, 2018). Data analysis is seen as a difficult, time-consuming, yet creative and intriguing activity (Hounslow, 2018). In this study, data were analysed using “partial least squares structural equation modelling” (PLS SEM). The PLS SEM is a variance-based approach for estimating route models using latent variables. SEM is a “multivariate statistical technique that allows researchers to estimate and test causal correlations” (Dakduk, González & Portalanza, 2019). In SEM, there are two kinds of models: measurement models and structural models. The outside model is known as the measuring model, while the inside model is known as the structural model. This research used descriptive analysis and PLS SEMS (measurement model and structural model) to analyse and interpret data (Dakduk, 2019).

4.9.1 Descriptive analysis

The transformation of acquired data into understandable and interpretable information is known as descriptive analysis (Kabacof, 2022). In addition, descriptive statistics organises the outcomes of data collection and the relationships between variables (Chamber, 2018). Descriptive analysis is the first step in the data analysis process, and it is considered as a summary of raw data that has been turned into information that can be easily comprehended and analysed (Chamber, 2018). Descriptive statistics is useful for examining the fundamental properties of data, which are frequently displayed in frequencies and measure the central tendency and dispersion. To analyse data in this study, the descriptive analysis method was used. This method was used in this investigation to numerically describe the data. The research constructs were explained using descriptive statistical analysis.

4.9.2 Structural equation modelling (SEM)

SEM is a multivariate data analysis tool of the second generation. SEM is extensively employed in market research because it enables the validation of theoretically justified additive and linear causal models (Hair et al., 2021). SEM is appropriate for tackling

business research problems due to its ability to use unobservable, difficult-to-measure latent variables (Ahmad, Zulkurnain & Khairushalimi, 2016). The outer model provides the links between latent variables and their observable indicators, while the inner model specifies the relationships between independent and dependent latent variables (Wong, 2016). Variables in SEM might be exogenous or endogenous. Exogenous variables have no path arrows leading to them. An endogenous variable, on the other hand, has at least one path leading to it and represents the effects of one or more other variable(s) (Sarstedt & Cheah, 2019).

4.9.3. Types of SEM

The first method is the widely used covariance-based SEM (CB-SEM), which employs software packages such as AMOS, EQS, LISREL, and MPlus. The second method is Partial Least Squares (PLS), which focuses on variance analysis and may be performed using PLS-Graph, VisualPLS, SmartPLS, and WarpPLS (Gudergan, 2020). It is also compatible with the PLS module of the statistical software package R. The third approach, according to Ringle, Sarstedt, Mitchell and Gudergan (2020), is a component-based SEM known as Generalized Structured Component Analysis (GSCA), which is implemented via Visual GSCA, or a web-based program called GeSCA. Non-linear Universal Structural Relationship Modeling (NEUSREL) is another way of performing SEM that employs NEUSREL's Causal Analytics software (Memon, Ramayah, Cheah, Ting, Chuah & Cham, 2021).

These methods are further detailed below:

- *CB-SEM:*

In the social sciences, CB-SEM has been used for many years and it is still the preferred data analysis method for testing or rejecting theories through hypothesis testing, particularly when the sample size is large, the data are normally distributed, and, most importantly, the model is correctly specified (Khoi & Tuan, 2018). In other words, when converting a theory to a structural equation model, the right variables are chosen and linked together (Sarstedt, Hair Jr, Nitzl, Ringle & Howard, 2020). Many scholars and professionals in the business, however, observe that it is frequently

difficult to locate a dataset that fits these conditions (Shiau et al., 2019). Furthermore, when we know nothing about the linkages that exist, the research purpose can be exploratory.

- *PLS-SEM:*

PLS is a SEM soft prediction model that makes no assumptions regarding data distribution (Cheah, Nitzl, Roldan, Cepeda-Carrion & Gudergan, 2021). As a result, under the following situations, PLS-SEM is a good substitute for CB-SEM: small sample size; limited theory is available for applications; high priority is put on prediction accuracy; and uncertainty surrounding accurate model specification. It is important to note that PLS-SEM is not appropriate for all forms of statistical analysis (Khoi & Tuan, 2018). Managers should also be aware of PLS-SEM's limitations, such as the need for high-quality structural path coefficients when the sample size is minimal (Khoi & Tuan, 2018).

It fails to model undirected correlation if the problem of multicollinearity is not effectively handled when arrows only have one head at a time (Latan, 2018). A lack of total consistency in latent variable assessments may lead to a biased component estimate (Hwang, Choi & Shin, 2020). Loads and path coefficients can have substantial mean square errors in their estimation (Hair, Hult, Ringle & Sarstedt, 2017). Despite these disadvantages, PLS is effective for structural equation modelling in practical research projects, especially when there are few respondents and the data distribution is skewed, such as when interviewing female executives or multinational CEOs. PLS-SEM has been used in many fields, including behavioural sciences, marketing, administration, management information systems, and corporate planning (Latan, 2018).

- *GSCA & Other Approach:*

When general measures are necessary for model fitting or nonlinear latent variables must be tolerated, GSCA may be a better option than PLS for running structural equation models (Hwang, Sarstedt, Cheah & Ringle, 2020). However, because GSCA and NEUSREL are relatively new techniques in SEM, there is a limited amount of

literature to review. Managers and owners may struggle to locate sufficient examples to comprehend how these new SEM methodologies might be applied in various business research settings (Hair, Hult, Ringle & Sarstedt, 2017). Because of its reduced sample size requirements, easier testing of moderating and mediating interactions, and built-in ability to cope with formative indicators, the researcher used PLS-SEM in this study endeavour.

4.9.3. PLS SEM

PLS is a SEM soft prediction model that makes no assumptions regarding data distribution (Cheah, Nitzl, Roldan, Cepeda-Carrion & Gudergan, 2021). Smart PLS Version 4.0. 9.1 was used to analyse both the measurement model and the structural model (Fatoki, 2021). SEM, a multivariate statistical tool was used to assess causal links among several variables. Advantage of PLS SEM is the ability to build both models (structural and measurement) concurrently (Hair, Risher, Sarstedt & Ringle, 2019). In hospitality literature, SEM is utilised to address a wide range of difficulties. The reliability of each construct was evaluated using the composite reliability and Cronbach's alpha. The PLS algorithm was used to investigate discriminant validity, construct (convergent) validity, and composite validity. The PLS algorithm was used to examine the discriminant validity, construct (convergent) validity as well as composite validity (Hair, Risher, Sarsted & Ringle, 2019). SEM was administered to assess the suggested relationships between the constructs as soon as the measurement model is validated through discriminant validity and construct validity. Bootstrapping was used to measure the significance of the estimations.

4.9.4. Requirement of the PLS SEM

The PLS SEM requires both measurement and structural model. Factor loadings, composite reliability, Cronbach's alpha, AVE, Fornell Larcker, Cross-loadings, and HTMT were used to evaluate the measurement model. The structural model's evaluation is measured using the R^2 , f^2 , Q^2 , and model fit.

4.9.5. Measurement model evaluation

The validity and reliability of the variables were assessed using the measurement model (outer model) (Dakduk et al., 2019). The model fit statistics must be tested in

order for the data from the measurement model to be validated as sufficient (Demir, Rjoub & Yesiltas, 2021).

✓ Factor loadings

The initial step is analysing item loadings in a reflective measurement model.

The suggested value for these item loadings is 0.708. (Hair et al., 2019). When the value is 0.708 or above, the threshold of item loadings is substantial (Fatoki, 2019).

✓ Composite reliability and Cronbach's alpha

The thresholds for composite reliability and Cronbach's alpha are nearly similar. Higher observed variable values produce higher degrees of dependability; the composite reliability coefficient ranges from 0 to 1 (Hair et al., 2019). Cronbach's alpha is used to determine how effectively each individual variable connects to the other elements in a scale. Cronbach's alpha produces comparable but lower results than composite reliability. The alpha coefficient ranges between 0 and 1.

✓ Average Variance Extracted (AVE)

Convergent validity is defined as the extent to which the construct converges to explain the variance of its elements (Hair et al., 2019). Convergent validity indicates whether or not the indicators are congruent in their ability to measure the underlying construct. Convergent validity measures the relationship between the concept and a similar measure, confirming that constructs which are expected to converge are related. This is evident when the AVE is greater than or equal to 0.50. Furthermore, according to various research, the lowest suggested value of AVE is 0.50 (Fatoki et al., 2019).

✓ Fornell-Larcker

The Fornell-Larcker criterion is simply the square root of AVE when compared to the correlation of latent variables (Hair et al., 2019). It simply means that the latent variable must explain more variance in its own observed variables than other latent variables. The square root of each construct's AVE should be larger than the correlations with other latent constructs.

✓ Cross-loadings

Another criterion used to evaluate discriminant validity is cross-loadings. Looking at the cross-loadings, the factor loadings indications on the assigned construct must be greater than all loadings on other constructs, assuming the factor loadings cut-off value is more than 0.70.

✓ Heterotrait-Monotrait (HTMT)

The HTMT is defined as “the mean value of the item correlations across constructs relative to the (geometric) mean of the average correlations for the items measuring the same construct” (Hair et al., 2019). Another measure of discriminant validity is the HTMT ratio of correlation.

• **Structural model evaluation**

The structural model (inner model) was utilised to quantify the proposed links between components (Dakduk et al., 2019).

The Smart PLS version 4.0 will be utilised in this study to evaluate the inner model and assumptions. To determine the needed quality of the outer model, bootstrapping will be used.

✓ R^2

When the value of R^2 is 0.19, the construct is regarded weak, moderate when the value is 0.33, and significant when the value is 0.67.

When the R^2 value is 0.75, it is substantial, moderate when it is 0.50, and weak when it is 0.25.

A

✓ f^2

The f^2 statistic is used to assess the significance of the research constructs (Demir et al., 2021). When f^2 is 0.02, it is weak; when it is 0.15, it is moderate; and when it is 0.35, it is strong.

✓ Q²

According to Sharma, Shmueli, Sarstedt, Danks, & Ray, 2021. When a Q² value is greater than 0.5, the model is seen as predictive.

✓ Model fit.

The model fit will be used to calculate the standardised root mean residual (SRMR).

SRMR value greater than 0.10 indicates an appropriate model fit. A SMRM value greater than 0.20 indicates that the model is well-fitting (Sharma et al., 2021).

4.9. RELIABILITY AND VALIDITY

This section outlines reliability and validity. The definitions and measures of reliability and validity will be enlightened.

4.10.1 Reliability

Reliability refers to the degree to which a measurement of a study gives consistent and accurate results (Breneman, Sahay & Lewis, 2022). Analysing reliability is significant as it ensures the consistency of the measuring. Breneman et al. (2022) further describe reliability as the degree to which measurements reappear when researchers execute these measures on different cases. Reliability shows the degree of solidity and consistency of a measuring tool over several repeat measurements (Sahay & Lewis, 2022). Furthermore, reliability is the ability of a yardstick to regurgitate the same output of a study. Internal consistency reliability, on the other hand, is verified by using composite reliability or Cronbach's alpha (Hwang et al., 2020). The Cronbach's alpha coefficient is used to measure the consistency of reliability and to evaluate how well each single variable relates in a scale with other remaining (Meeker, Escobar & Pascual, 2022). The alpha coefficient ranges from 0 to 1 and is considered to be reliably strong when it is on 0.70 and greater. An alpha that is less than 0.5 is considered to be unacceptable, and the one between 0.5 to 0.7 poor and questionable (Evren, Evren, Dalbudak, Topcu & Kutlu, 2022). An alpha coefficient between 0.7 to 0.8 is acceptable and moderate, between 0.8 to 0.9 good and strong, and greater than 0.9 is considered to be excellent and very strong (Ravinder & Saraswathi, 2020).

Internal consistency reliability, on the other hand, is validated by the use of composite reliability or Cronbach's alpha (Hwang et al., 2020).

For this study, the researcher used the internal consistency (Cronbach's alpha) reliability because it is the easiest to compute using software; it requires only one sample of data to estimate internal consistency reliability. Cronbach's alpha is a reliability metric used to evaluate the extent to which item responses derived from a scale correlate with each other. The alpha coefficient ranges in value from 0 to 1. The higher the score, the more reliable the generated scale is. A score of 0.7 is the acceptable reliability coefficient.

4.10.2 Validity

The validity of a research tool indicates whether it measures the variable that it is intended to assess, as well as the accuracy and certainty of study findings (Meeker et al., 2022; Breneman et al., 2022). Moreover, validity refers to the process of obtaining data that is suitable for the required use of the measuring tool (Maslakçi, 2020). Validity is used to demonstrate that appropriate measures are used. Furthermore, validity examines whether the instrument provides a representative sample of items that depict that idea. The goal of validity is to demonstrate how free the evaluation procedure is of both systematic and random errors. There are four major types of validity. They are made up of "face, content, construct, and criterion validity" (Ravinder, & Saraswathi, 2020; Amirrudin et al., 2021; Bujang et al., 2018).

4.10.2.1 Face and content validity

Face validity refers to how well the research instrument covers the content (Johnson, 2021). It is the extent to which the tool measures all relevant material (Schulz, Back, Schaan, Bertsch & Vögele, 2021). Content validity is the degree to which a research instrument accurately measures all aspects of a construct. The content validity of an instrument is determined by how well its set of items matches the content of the construct (Almanasreh, Moles & Chen, 2019). As a result, the researcher must create a tool that adequately covers the investigated construct (Shrotryia & Dhanda, 2019). Face and content validity was ensured through a pilot study.

4.10.2.2 Criterion validity

Criterion validity is the degree to which a measure is linked to a result (Almanasreh, et al., 2019). It examines how well one measure predicts the outcome of another. The “degree to which a research instrument is related to other instruments that measure the same variables” is defined as criterion validity (Yusoff, 2019; Almanasreh, 2019). Moreover, criterion validity refers to the correspondence of an instrument and one or more variables (Hair et al., 2019).

In this study, criterion validity was ensured by computing the correlation between measurement results and criterion measurement results (Shrotryia & Dhanda, 2019). A strong correlation indicates that your test is measuring what it is supposed to assess (Schulz et al., 2019).

4.10.2.3 Construct validity

Construct validity refers to the degree to which the research tool measures the intended construct (Mathieu, Luciano, D’Innocenzo, Klock, & LePine, 2020). It examines how well a scale measures what it is supposed to measure. The scales to measure the constructs of the study were adopted from previous studies with acceptable Cronbach’s alpha coefficients. In addition, discriminant and convergent validity are the two subsets of construct validity (Cella & Martin, 2022). Discriminant validity aids in determining whether constructs differ from one another. It is the way a construct differs empirically from other constructs in the inner model. Furthermore, it examines the relationships between the unrelated measure and the construct, revealing that constructs are not linked to something unexpected (Fabrigar, Wegener & Petty, 2020). Discriminant validity measures the degree of difference between overlapping variables (Roemer, Schuberth & Henseler, 2021). Discriminant validity can be measured in a variety of ways, including the “Fornell & Larcker” method, cross-loading and heterotrait-monotrait ratio (HTMT) (Franke & Sarstedt, 2019).

The Fornell-Larcker criterion is simply the square root of AVE when compared to the latent variable correlation (Roemer, Schuberth & Henseler, 2021). Simply put, the latent variable must explain the variance of its own observed variables when compared to other latent variables. The square root of the AVE of each construct should have a

greater value than the correlations with other latent constructs (Roemer et al., 2021). Another criterion used to assess discriminant validity is cross-loadings. In cross-loadings, the indicators of item loading on the assigned variable must be greater than any other loading of other variables, assuming the cut-off value for factor loadings is greater than 0.708. Another measure of discriminant validity is the HTMT ratio of correlation. The HTMT is defined as the mean value of item correlations across constructs (Franke et al., 2019).

HTMT is capable of achieving the highest sensitivity and specificity rates (97% to 99%) when compared to the cross-loadings criterion (0.00%) and Fornell Lacker (20, 82%). When the HTMT value is close to 1, it indicates that discriminant validity is poor. Using the HTMT as a discriminant validity criterion entail comparing it to a predefined threshold (Franke et al., 2019). When the value of HTMT exceeds its threshold, discriminant validity is poor. Several researchers suggested that the HTMT threshold be 0.90. To ensure that constructs differed from one another, the researcher used cross-loadings, Fornell-Lacker, and HTMT9 (Hair et al., 2019).

Convergent validity is defined as the extent to which the construct converges to explain the variance of its items (Hair et al., 2019). It shows whether the indicators are working together to measure the underlying construct. Moreover, it tests the relationship between the construct and a similar measure (Rogge, Daks, Dubler & Saint, 2019). Numerous studies have indicated that the minimum suggested AVE value is 0.50 (Fatoki, 2019). This study used AVE to ensure that the items in the research construct measure what they are supposed to measure and by also ensuring that indicators and measurements are properly created based on relevant current knowledge.

4.10.2.4. Statistical validity

Statistical validity refers to the extent to which a statistical study can draw conclusions that agree with statistical and scientific laws and theories. It is essential for researchers to ensure statistical validity in their research study to produce dependable knowledge or provide evidence that may predict whether or not a particular thing will happen in the future. The researcher ensured statistical validity by using adequate sampling

procedures, appropriate statistical tests, and reliable measurement procedures and only accepting hypotheses with less than 5% level of significance.

4.11. ETHICAL CONSIDERATIONS

The researcher ensured that the confidentiality and privacy of the small hotels and the employees are carefully maintained. The questionnaire was not required of the participants. All the participants were given an option to withdraw from the procedure if they felt uncomfortable. The researcher gained authorisation from the University of Limpopo's Turfloop Research Ethics Committee after submitting the research proposal, along with a faculty approval letter and the questionnaire. The questionnaire was created prior to data collection. Personal information about participants was kept private at all times, and participants' anonymity were maintained. The data analysis was fair and was only used for research purpose. Ethical considerations are listed below:

- **Voluntary participation:** Voluntary Participation refers to when a human study participant utilises their right to free choice. This right is protected by national law, international law, and the principles of behaviour of the scientific community (Somerset & Hoare, 2018). Respondents were asked to participate in the study by volunteering rather than being compelled in any way. The survey participants were neither pressured nor forced to participate. Participants were not compensated for taking part in the research. Moreover, participants were free to withdraw from the survey at any moment, with no negative consequences. This information was included in the consent letter.
- **Participant anonymity and information confidentiality:** Confidentiality implies that the researcher knows who the participants are but conceal their identities in the study report, whereas anonymity implies that the researcher does not know who they are. Both are significant moral issues (Pietilä, Nurmi, Halkoaho & Kyngäs, 2020). In this study, both the names of all the participants in the study and the data gathered, were strictly kept confidential by the researcher. The researcher protected the participants'

privacy by not collecting any unique identifiers such as physical address, name, phone number, email address. The identities of the participants were never disclosed to a third party. Both the consent letter and the questionnaire's cover page included information about privacy and anonymity.

- **Informed consent:** The act of giving a full consent before fully participating in the study is referred to as informed consent (Thompson, Stringfellow, Maclean & Nazzal, 2021). The researcher ensured informed consent by developing an informed consent form that comprised information about the research study and requested the participants' consent. The participants signed an indemnity form. It was written in a language that the participants understood, which minimised the chance of coercion and granted the participants adequate time to consider participating in the study.
- **Dignity and respect:** Dignity is the attribute of being deserving or honourable, and respect is shown to someone based on their characteristics or successes (Thompson, et al., 2021). The researcher acknowledged that each individual had the right and ability to make his or her own decisions. The researcher ensured the participants' dignity was valued by respecting them. The researcher was polite and non-aggressive in her interactions with participants, and all participants were given the same questionnaire to complete fairly and equally. These ensured that dignity and respect were maintained by the researcher.
- **Risk and harm:** refers to the likelihood that a particular hazard will result in harm. It is associated with situations such as health risks due to exposure to hazardous substances, financial risks due to investment decisions, or risks related to driving safety (Arifin, 2018). There were no risk or harm (physical, psychological, social, legal, or economic) associated with participating in this study.
- **Permission letter:** A permission letter is an official document that is written to request permission from a higher authority or organisation for a specific purpose. It is a formal request that outlines the details of the proposed activity and seeks approval from the relevant parties (Green, 2019). The researcher created a permission letter, which was given to the owner or manager of small and medium-sized hotels to obtain their

permission to conduct the study. Prior to distributing the questionnaire, permission was obtained.

- Vulnerable persons: There were no vulnerable persons in the research. All the participants were above 18 years. In addition, the questionnaire was translated into Sepedi, a widely used local language in the study areas to accommodate participants that were not comfortable with the English language.
- Data storage: Data obtained from the respondents and the analysis of data will be stored by the researcher and supervisor on computers for five years.

4.12. SUMMARY

This chapter covered and discussed the research method. The research method and philosophy were discussed to establish a conceptual framework for understanding the methods used. Furthermore, the sample method, data collection methods, quantitative approach, and data analysis method demonstrated the justification for employing the research design. The research design was used in this study to assist the researcher in choosing the type of research questions that should be generated. The research approach aided the researcher in making the correct decision regarding the procedures to be used in data gathering and analysis.

Moreover, the study used SmartPLS 4.0 to analyse the data from the respondents. This analytical tool has two parts .i.e. the PLS part and the SEM part. Reliability and validity were ensured using the PLS-SEM. To verify that the data collected from respondents was not biased, ethical considerations were explored. The principles of privacy and secrecy were rigorously followed. The outcomes of the research are discussed in the next chapter. The above chapter revealed various methodological analyses that the study used. The next chapter will present the results of the study on the antecedents of employee pro-environmental behaviour. The response rate and the demographic variables of the respondents will be discussed.

CHAPTER FIVE

DATA ANALYSIS AND INTERPRETATION OF RESULTS

5.1. INTRODUCTION

This section presents the results of a research carried out on the factors that impact employees' pro-environmental behaviour in small and medium-sized hospitality businesses. The chapter contains an overview of the response rate and personal characteristics of the individuals who participated in the survey. The normality of the data, demographic and geographic variables and age of the respondents will also be presented. Furthermore, it provides extensive details on the descriptive and inferential outcomes of the study. Descriptive data is used to explain the attributes of the respondents, while inferential statistics tests the hypotheses and model of the investigation.

The employee pro-environmental behavior (EPB) in hospitality firms, which is the independent variable, is tested with the dependent variables, and the resulting data is analysed. The outcomes of demographic characteristics of respondents are presented in the form of frequency tables and graphs, which show the percentages. Descriptive statistics, such as the means and standard deviation, indicate the scores of the respondents on the variables under scrutiny, and graphical summaries are used to represent the statistics of the data. Various tools such PLS SEM, and correlation analysis are used to evaluate and discuss the data, and the Cronbach's alpha is utilised to assess the internal consistency reliabilities. The linear regression model is outlined with the statistical data and interpreted based on the results. The study concludes by discussing the results of hypothesis testing, which confirms the relationship between the variables.

5.2. NORMALITY OF DATA

Cain, Zhang and Yuan (2017) suggest that to assess whether data follows a normal distribution, skewness and excess kurtosis should be tested. Non-symmetry in the distribution occurs when skewness is not zero, while deviations from normality occur

in the distribution's tail mass and shoulder when kurtosis is not zero (Qu, Liu & Zhang, 2020). According to Orcan (2020), non-normality can be classified as slight when the absolute values of skewness and kurtosis are less than 1.0, moderate when between 1.0 and 2.3, and severe when beyond 2.3. In this study, the normality of the data was assessed using excess kurtosis and skewness. Normality tests are used to examine whether a data set is properly described by a normal distribution and to estimate the likelihood that the data set's random variable is normally distributed (Mishra, Pandey, Singh, Gupta, Sahu & Keshri, 2019). When a small p-value (typically 0.05) strongly refutes the null hypothesis, the null hypothesis is accepted. The null hypothesis is not rejected since a high p-value (> 0.05) indicates that there is little evidence to support it.

Table 5.1: Normality analysis for Altruistic Values, Biospheric Values, Egoistic Values, New Ecological Paradigm, Awareness of consequences, Ascription of responsibility, Personal Norm, Social Norms, Anticipated Pride, and Employee Pro-Environmental Behaviour.

Table 5.1: Normality analysis

Name of constructs	Kolmogorov-Smirnov	
	Statistic	Sig.
AV	0.160	0.000
BV	0.148	0.000
EV	0.134	0.000
NEP	0.116	0.000
AC	0.013	0.000
AR	0.116	0.000
PN	0.123	0.000
SN	0.138	0.000
AP	0.117	0.000
EPB	0.139	0.000

Note sig @ 10%: Altruistic values (AV), Biospheric values (BV), Egoistic values (EV), New ecological paradigm (NEP), Awareness of consequences (AC), Ascription of responsibility (AR), Social Norms (SN), Anticipated Pride (AP) and Employee pro-environmental behaviour (EPB).

Table 5.1 indicates that AV, BV, EV, NEP, AC, AR, PN, SN, AP, and EPB are tested for normality. The normality analysis for AV by Kolmogorov-Smirnova is 0.160 and sig @ 0.000, BV is 0.148 and sig @ 0.000, EV is 0.134 sig @ 0.000, NEP is 0.116 sig @ 0.000, AC is 0.013 and sig @ 0.000, AR is 0.116 and sig @ 0.000, PN is 0.123 and sig @ 0.000, SN is 0.138 and sig @ 0.000, AP is 0.117 and sig @ 0.000 and EPB is 0.139 and sig @ 0.000. Because of the normality rate supported, the results show that these constructs are fit for testing by the SmartPLS software.

5.3. RESPONSE RATE

The researchers distributed 720 questionnaires to participants, out of which 370 were returned and considered usable, while 350 were not returned. Table 5.1 provides details on the response rate of hotels that took part in the study.

Table 5.2 Response Rate

Respondents	No sent out	No returned	Response rate percentage	No not returned	Non return percentage
Small hospitality firms' employees	720	370	51.4%	350	48.6%

Table 5.2 displays the survey's response rate. Out of the seven hundred and twenty (720) questionnaires that were distributed, three hundred and seventy (370) were returned, resulting in a response rate of 51.4% among participants. The remaining three hundred and fifty (350) questionnaires were not returned, indicating a non-return rate of 48.6%.

5.3. DEMOGRAPHIC INFORMATION

The aim of this section was to collect demographic data on the participants. Demographic characteristics of respondents include gender, age, level of education, number of years an employee have been working in the organisation, and the number of employees in the firm. The demographic data is presented through tables and figures as part of the survey's discussion.

5.3.1. Gender

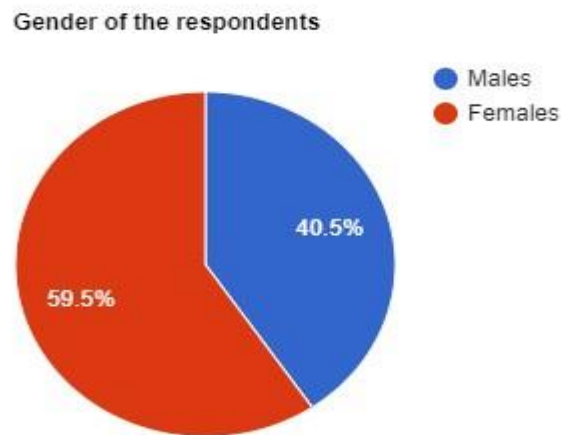
Determining the gender of participants is crucial in any study. This section reveals changes of gender patterns of hospitality firms' employees in terms of their involvement in employee pro-environmental behaviour. Increasing the pool of employees in terms of their gender is crucial as it stimulates job creation, innovation, diversity, and gender equality (Cletus, Mahmood, Umar & Ibrahim, 2018).

Table 5.3 and Figure 5.1 show results of respondents

Table 5.3 Gender of the respondents

Gender	Frequency	Percent	
Male	150	40.5	
Female	220	59.5	

Figure 5.1: Gender of the respondents



5.3.2. Age

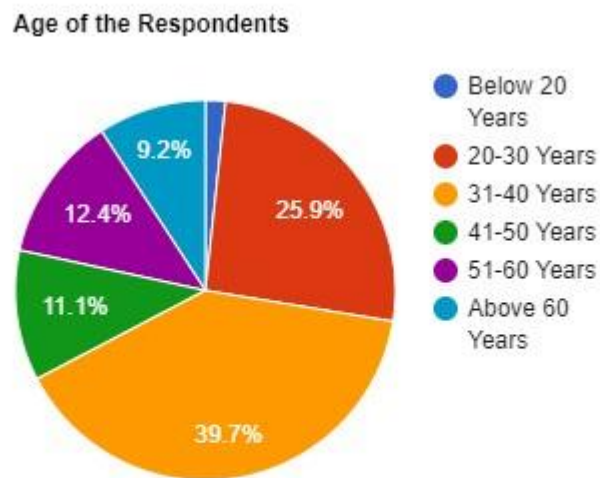
It is crucial to consider the gender of the participants in a study. The objective of examining age patterns among employees of small hospitality firms is to determine the most prevalent age group and comprehend their perspectives, goals, and motivations for pro-environmental practices in the hospitality industry. The results are presented through Figure 5.2 and Table 5.3.

Table 5.4 Age of the Respondents

	Frequency	Percent
Below 20 Years	6	1.7%
20-30 Years	96	25.9%
31-40 Years	147	39.7%
41-50 Years	41	11.1%
51-60 Years	46	12.4%
Above 60 Years	34	9.2%

Source: author's data analysis

Figure 5.2: Age of the respondents



5.3.3. Level of education

Education is addressed to check if it has an impact on the pro-environmental behaviour of employees in the hospitality industry and whether current employees in hospitality firms would recommend that future employees receive education before entering the industry. Table 5.4 and figure 5.3 outline the results in detail.

Table 5. 5: Respondent's level of education

	Frequency	Percentage
Below matric	76	20.5%
Matric	153	41.4%
Diploma/Degree	127	34.3%
Honours	13	3.5%
Masters	1	0.3%
Doctoral	0	0%

Source: author's data analysis

Figure 5.3: Respondent's level of education

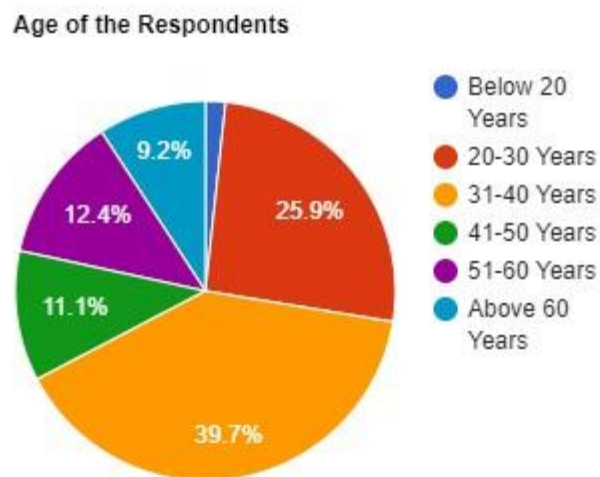


Figure 5. 1: Respondent's level of education

In relation to education, only 20.5% of the participants do not have matric, while 41.4% have matric, 34.3% had a Diploma/Degree, 3.5% had honours, 0.3% had master and 0% had doctoral qualifications. The overall outcomes of the study showed that many of the participants have an educational background. These outcomes indicate that many respondents who work in successful small hospitality firms are educated. This research study continues to contend that education has a significant impact on an individual since it provides guidance and insight on how to run a successful firm (Dwivedi, Hughes, Coombs, Constantiou, Duan, Edwards, Gupta, Lal, Misra, Prashant, Raman, 2020).

5.3.4 Number of years working in the firm

The table below illustrates the number of years that an employee have been working in the firm.

Table 5. 6: Respondent's number of years working in the firm.

	Frequency	Percentage
0-1 year	20	5.4%
2-5 years	59	15.9%
6-10 years	107	28.9%
11-15 years	112	30.3%
16 years and above	72	19.5%

Source: author's data analysis

Figure 5.4: Respondent's number of years working in the firm.

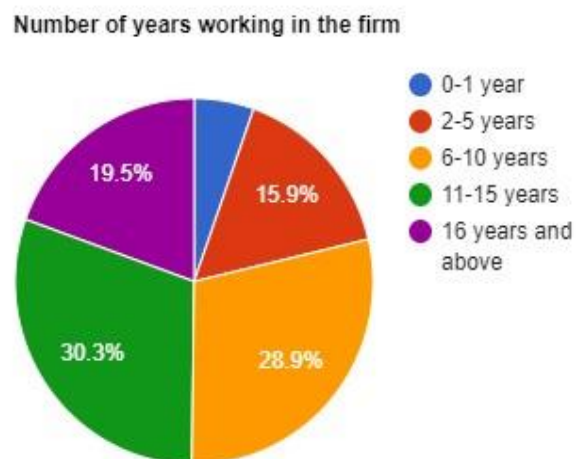


Figure 5.2: Number of years working in the firm.

The analysis of years the employee have been employed in the firm revealed that 5.4% of the employees have been working in the organisation for 0-1 year, 15.9% have been working for 2-5 years and 28.9% have been working in the firm for 6-10 years. Furthermore, 30.3% of the employees have been working in the firm for 11-15 years and lastly 19.55 have been working in the hospitality forms for more than 16 years. This outcome demonstrates that most respondents in this research were employees who have been working for 11- 15 years. 5.45% is employees who have been working in the firm for less than a year. Hospitality firms have few new employees compared to old employees. This implies that the hospitality firms are successful in retaining their workers for an extended period (Irabor & Okolie, 2019). This could be due to any number of factors, such as competitive salaries and benefits, a positive work environment, opportunities for career advancement, job security, and a sense of loyalty to the company. When a firm can keep its employees, it can benefit from a more experienced and skilled workforce, reduced turnover costs, and improved morale time (Irabor & Okolie, 2019).

5.3.5 Number of employees

Table 5.7 below represents the number of workers within a company. It indicates the frequency and percentage number of workers within a company. Figure 5.5 was created using the information from the table.

Table 5. 7: Number of employees

	Frequency	Percentage
0-10	62	18.4%
11-50	152	41.1%
51-250	156	42.2%

Source: author's data analysis

5.3.5. Position

Table 5.8 displays the job titles of the individuals involved, illustrating the percentage and frequency of each position. Figure 5.7 was generated based on the data gathered from the table.

Table 5. 8: The job title of the individual being surveyed.

	Frequency	Percentage
Reservation and marketing	27	7.3%
Human resource	45	12.2%
Finance	11	2.6%
Food and Beverage	86	23.2%
House Keeping	109	29.9%
General Management	12	3.2%
Other	80	21.6%

Source: author's data analysis

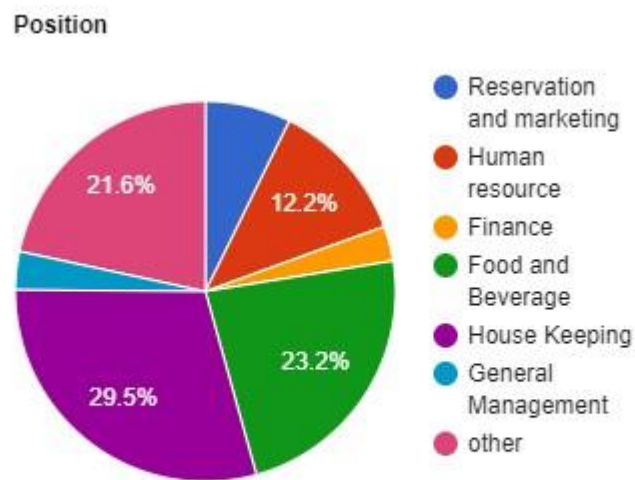


Figure 5. 6: Position

The analysis depicted in Figure 5.7 portrays the breakdown of respondents' positions or ranks, with most employees working in housekeeping positions, accounting for 29.9% of the sample population. Further analysis revealed that 23.2% of the respondents worked in food and beverage positions, while 12.2% were in human resources, 7.3% were in reservation and marketing positions, and 2.6% were in finance. Only 3.2% of respondents held general management positions, and 26.1% worked in other positions. These results indicate a higher concentration of employees in housekeeping positions than any other category.

5.4 DESCRIPTIVE STATISTICS

The mean, standard deviation, excess kurtosis, and skewness have all been used to examine the descriptive statistics of the research constructs. Below is a discussion of the descriptive statistics.

Table 5. 1: Descriptive statistics

Constructs	Mean	Standard deviation	Excess Kurtosis	Skewness
Altruistic values	4,556	0,683	1,215	-1,403
Egoistic values	4,684	0,563	5,998	-2,036
Biospheric values	4,716	0,465	-0,194	-1,147
New environmental paradigm	2,941	1,274	-1,235	0,397
Awareness of consequences	4,400	0,540	-1,032	-0,077
Ascription of responsibility	4,413	0,493	-1,888	0,358
Personal norm	4,425	0,495	-1,919	0,305
Social norms	4,425	0,495	-1,923	0,305

Anticipated pride	4,447	0,498	-1,966	0,215
Employee pro-environmental behaviour	4,771	0,429	0,452	-1,432

Source: author's data analysis

Table 5.9 above displays the findings of the descriptive statistics of the research constructs. These results were measured in terms of mean, standard deviation excess kurtosis and skewness. Altruistic values has a mean of 4,556, standard deviation of 0,683 and excess kurtosis of 1,215 and skewness of -1,403. Egoistic values has a mean of 4,684 and standard deviation of 0,563 and excess kurtosis of -5,998 and skewness of -2,036. Biospheric values has a mean of 4,716, standard deviation of 0,465 and excess kurtosis of -0,194 and skewness of -1,147. New environmental paradigm has a mean of 2,941, standard deviation of 1,274 and excess kurtosis of -1,235 and skewness of 0,397. Awareness of consequences has a mean of 4,400, standard deviation of 0,540 and excess kurtosis of -1,032 and skewness of -0,077. Ascription of responsibility has a mean of 4,413, standard deviation of 0,493 and excess kurtosis of -1,888 and skewness of 0,358. Personal norm has a mean of 4,425, standard deviation of 0,495 and excess kurtosis of -1,923 and skewness of 0,305. Social norms has a mean of 4,425, standard deviation of 0,495 and excess kurtosis of -1,966 and skewness of 0,305. Anticipated pride has a mean of 4,447, standard deviation of 0,498 and excess kurtosis of -1,966 and skewness of 0,215. Employee pro-environmental behaviour has a mean of 4,771, standard deviation of 0,429 and excess kurtosis of 0,452 and skewness of -1,432.

5.5 PLS SEM

5.6.1 Measurement model evaluation

The first stage in evaluating the outcomes in PLS-SEM, according to Hair et al. (2019), is to test the measurement model. This model has two subsets, namely, the reflecting measurement model and the formative measurement model.

5.5.1.1 Assessing the reflective measurement model.

- **Factor loadings**

Table 5. 2: Factor loadings

Constructs	Measurement Item	Item Loading
Altruistic values		
	AV1	0.768
	AV2	0.902
	AV3	0.884
Egoistic values		
	EV1	0.979
	EV2	
	EV3	0.983
	EV4	0.989
Biospheric values		
	BV1	0.898
	BV2	0.931
	BV3	0.972
	BV4	0.813
New environmental paradigm		
	NEP1	0.831
	NEP2	0.715
	NEP3	0.823
	NEP4	0.901

	NEP5	0.818
	NEP6	0.833
	NEP7	0.854
Awareness of consequences		
	AC1	0.807
	AC2	0.895
	AC3	0.786
	AC4	0.912
Ascription of responsibility		
	AR1	0.962
	AR2	0.987
	AR3	0.982
Personal norm		
	PN1	0.956
	PN2	0.968
	PN3	
	PN4	0.971
Social norms		
	SN1	0.958
	SN2	0.963
	SN3	0.987
Anticipated pride		
	AP1	0.826

	AP2	0.789
	AP3	0.872
	AP4	
Employee pro-environmental behaviour		
	EPEB1	0.985
	EPEB2	0.832
	EPEB3	0.879
	EPEB4	0.899
	EPEB5	0.714
	EPEB6	0.721
	EPEB7	0.758

Source: author's data analysis

The results provided in table 5.10 above show that the loadings are more than the appropriate threshold of 0.708. Item loading ranges from 0.714 to 0.989 for all variables. Several scholars agree that the threshold of item loadings is substantial when it is 0.708 or higher (Fatoki, 2019).

- **Reliability**

In this study, composite reliability and Cronbach's alpha were used to assess internal consistency reliability. The findings of internal consistency reliability are shown in the table below.

Table 5. 3: Reliability

	Cronbach's alpha	Composite reliability
AV	0.831	0.875
EV	0.897	0.869

BV	0.956	0.944
NEP	0.798	0.873
AC	0.932	0.958
AR	0.968	0.915
PN	0.988	0.998
SN	0.821	0.864
AP	0.928	0.994
EPB	0.962	0.942

Source: author's data analysis

The internal consistency is represented in the table above by composite reliability and Cronbach's alpha. Cronbach's alpha values range from 0.798 to 0.988 for all latent variables. An Alpha coefficient between 0.7 and 0.8 is considered moderate and acceptable, one between 0.8 and 0.9 is considered strong and good, and one greater than 0.9 is considered very strong and exceptional (Rezigalla, Eleragi, Elkhailifa & Mohammed, 2020). As seen in the table above, the composite reliability values are greater than 0.90. Hair et al. (2019) complement the above assertion by stating that reliability levels between 0.70 and 0.90 are considered "satisfactory to good." As a result, the results show that all the structures' internal consistency is maintained.

Convergent validity

The AVE method is used to examine the convergent validity of the study's constructs. The outcomes are shown in Table 5.12.

Table 5. 4: Average Variance Extracted AVE

	AVE
AV	0.729
EV	0.998
BV	0.812
NEP	0.892

AC	0.810
AR	0.889
PN	0.875
SN	0.872
AP	0.851
EPB	0.763

Source: author's data analysis

The AVE results are displayed in the results above. Convergent validity is measured using the AVE. Additionally, the results shown in Table 5.4 demonstrate that the AVE values for AV, EV, BV, NEP, AC, AR, PN, SN, AP, and EPB are, respectively, 0.729, 0.998, 0.812, 0.892, 0.810, 0.889, 0.875, 0.872, 0.851, and 0.763. As a result, it is clear from the results that every number is greater than 0.5, which is regarded as a reasonable minimum criterion.

- **Discriminant validity**

The discriminant validity of the constructs is assessed using the Fornell-Larcker and HTMT tests. The discriminant validity results are shown in the table below.

Table 5.13: Fornell-Larker criteria for discriminant validity

	AV	EV	BV	NEP	AC	AR	PN	SN	AP	EPB
AV	0.876									
EV	0,147	0,809								
BV	0,231	0,052	0,906							
NEP	0,218	0,280	0,302	0,887						
AC	0,198	0,253	0,303	0,314	0,987					
AR	0,208	0,310	0,217	0,275	0,401	0,985				
PN	0,017	0,122	0,489	0,365	0,288	0,321	0,999			

SN	0,309	0,042	0,465	0,169	0,401	0,213	0,501	0,978		
AP	0,105	0,002	0,030	0,060	0,011	0,230	0,062	0,025	0,854	
EPB	0,115	0,260	0,305	0,211	0,210	0,203	0,305	0,370	0,050	0,890

Source: author's data analysis

The findings depicted in Table 5.13 above show that the square root of the AVE values for AV, EV, BV, NEP, AC, AR, PN, SN, AP, and EPB are 0.876, 0.809, 0.906, 0.887, 0.987, 0.985, 0.999, 0.978, 0.854 and 0.890, respectively. Each construct's square root of AVE is larger compared to the values in the same column with it. These results are consistent with the study conducted by Ab Hamid et al. (2017) who confirm that "the square root of each construct's AVE should have a greater value than the correlations with other latent constructs".

Table 5.5: Heterotrait-Monotrait Ratio (HTMT)

	AV	EV	BV	NEP	AC	AR	PN	SN	AP	EP B
AV										
EV	0,153									
BV	0,368	0,095								
NEP	0,403	0,231	0,503							
AC	0,332	0,289	0,514	0,420						
AR	0,411	0,516	0,830	0,507	0,634					
PN	0,398	0,258	0,406	0,419	0,399	0,458				
SN	0,118	0,137	0,689	0,352	0,459	0,373	0,689			

AP	0,239	0,356	0,398	0,378	0,402	0,321	0,478	0,301		
EPB	0,481	0,237	0,352	0,389	0,307	0,332	0,389	0,582	0,683	

Source: author's data analysis

The results presented in table 5.14 above show that HTMT values for all the constructs are less than one. The findings of this study are consistent with several authors who proposed a threshold of 0.85 (Henseler et al., 2015). Furthermore, the study of Kline (2011) asserts that poor discriminant validity exists when the value of HTMT is more than its threshold.

5.5.1.2 Evaluation of formative assessment

- **Collinearity statistics (VIF)**

Table 5. 6: Collinearity statistics

	VIF
AV1	2,785
AV2	2,378
AV3	2,722
BV1	1,589
BV2	2.768
BV3	2.312
BV4	2.652
EV1	2.011
EV2	2.426
EV3	2,532
EV4	3,685
NEP1	3,492
NEP2	3.789
NEP3	2.856
NEP4	2.924

NEP5	3.023
NEP6	3.001
NEP7	1,271
AC1	2,186
AC2	2,231
AC3	2,653
AC4	2,481
AR1	2,853
AR2	1,458
AR3	1,275
PN1	1,384
PN2	1,766
PN3	2,419
PN4	2,294
SN1	2.571
SN2	2,614
SN3	2.301
AP1	1,402
AP2	1,985
AP3	1,797
EPEB1	1,795
EPEB2	2.259
EPEB3	2.567
EPEB4	2.223
EPEB5	2.589
EPEB6	2.968
EPEB7	2.584

Source: author's data analysis

The indicator collinearity is shown in Table 5.15 above. Preferably, VIF values should be 3 or less. The table demonstrates that most of the values are near to or below 3. It also indicates that some numbers are more than 3. VIF values of 5 or higher indicate major issues of collinearity among the indicators (Rodrigues, Menezes & Ferreira, 2018). There are no values greater than 5.

5.5.2 Structural model evaluation

According to Goldammer, Annen, Lienhard and Jonas (2021), the structural model can only be measured if the measurement model's needed requirements are met.

5.6.2.1 R square (R^2)

The Smart PLS version 4.0 was utilised in this research study to evaluate the structural model and hypotheses. The model was bootstrapped to determine the required quality of the outer model, as described by Tundys and Winiewski (2023). According to Al-Sharafi, Al-Emran, Arpaci, Marques, Namoun and Iahad (2021), a construct is regarded weak when R^2 is 0.19, moderate when R^2 is 0.33, and important when R^2 is 0.67. Furthermore, Farmer, Kim and Lee (2022) corroborate the claim that the R^2 value is substantial at 0.75, moderate at 0.50, and weak at 0.25.

Table 5.7: R square (R^2)

	R Square
AV	0,037
EV	0.013
BV	0.042
NEP	0,239
PN	0,258

Source: author's data analysis

The results of R square are shown in the table above. PV, NEP, and PN can clearly explain only 3.4% of employee pro-environmental behaviour ($R^2 = 0.342$). The findings also suggest that the value belief norm variable theory, personal variables, and social factors used in this study explain 15.6% of employee pro-environmental behaviour ($R^2 = 0.156$). According to the above table, all of the outcomes are weak, as supported

by various writers who have stated that between $R^2 = 0.19$ and 0.25 , it is considered weak (Demir et al., 2021).

5.5.2.2 Effect size (f^2)

Table 5. 8: Effect size (f^2)

	AV	EV	BV	NEP	AC	AR	PN	SN	AP	EPB
AV				0.026						
EV	0,021			0,015						
BV										
NEP			0,186							
AC				0.022						
AR				0,028						
PN				0,015						
SN				0,018						
AP				0,021						
EPB				0,020						

Source: author's data analysis

Table 5.17 depicts the f^2 that is utilized to test the significant effects of the research constructs (Demir et al., 2021). When f^2 is 0.02, it is weak; when it is 0.15, it is moderate; and when it is 0.35, it is powerful. The results in table 5.8 show that AV, EV, BV, NEP, AC, AR, PN, SN, AP, and EPB are all weak because all the values are 0.02.

5.5.2.3 Q square

According to Fatoki (2020), a suggested measure is the model's predictive relevance (Q^2) which is in addition to the size of R^2 . This prediction is measured using two methodologies for Q^2 , namely cross validated redundancy and cross validated communality.

Table 5. 9: Q square (Q²)

	SSO	SSE	Q ² (=1-SSE/SSO)
PV	2931.000	2851.302	0.027
EPB	1217.000	1021.284	0.160
PN	1200.000	1011.836	0.682

Source: author's data analysis

The results in Table 5.18 demonstrate that the Q² values for all the research variables are greater than 0. According to Fatoki (2020), when the Q² value is more than 0.5, the model is considered predictive. PV, EPB, and PN have Q² values of 0.027, 0.160, and 0.682, respectively. This demonstrates that the model's predicted accuracy is high.

5.6.2.4 Model fit

Table 5.10: Model fit

	Saturated Model	Estimated Model
SRMR	0,080	0,205

Source: author's data analysis

The model fit, as measured by SRMR, is shown in Table 5.19 above. A SRMR value greater than 0.10 has been recommended to demonstrate sufficient model fit. The given results reveal that the value of SRMR is 0.080.

5.6.2.5. Path Coefficients and T-Statistics

To evaluate the hypothesis, the bootstrapping method was employed to determine the significance levels of the standardized coefficients, as suggested by Hair et al. (2019). The acceptable T-statistics for a two-tailed test are 1.65 for a 10% significance level, 1.96 for a 5% significance level, and 2.58 for a 1% significance level. The standard Beta value indicates the effect size of the endogenous latent variable, with larger values signifying a greater impact. The table below presents the path coefficient

effects and corresponding T-statistics, providing insights into the relationships between the variables. By examining these results, we can determine whether the hypothesis is accepted or rejected.

Table 5.20: Path coefficient and T-statistics

Hypothesis	Standard Beta	T-statistics	Decision
AV→EP	0.761	7.038	Accepted
BV→ EP	0.780	4.431	Accepted
EV→EP	0.372	5.765	Accepted
NEP→AC	0.352	7.038	Accepted
AC→AR	0.376	7.021	Accepted
AR→PN	0.359	7.038	Accepted
PN→EPB	0.567	5.062	Accepted
AP→EPB	0.678	7.031	Accepted
SN→EPB	0.758	4.258	Accepted

Sig @ 5% *NOTE: Altruistic values (AV), biospheric values (BV), Egoistic values (EV), Environmental paradigm (EP), Awareness of consequences (AC), Ascription of responsibility (AR), Personal Norm (PN), Anticipated pride (AP), and Employee pro-environmental behaviour (EPB)

The above table shows the T-statistics and path coefficient of the relationship between AV and P, BV, EV, and EP, AC, PN, AP, EPB and EPB. **H1=**Hypothesis one proposes that AV and EP are significantly positively related. The results (SB=0.761; T=7.038; P<0.05) show that there is a significant positive relationship between AV and EP. Hypothesis one is accepted. Then **H2=** Hypothesis two proposes that BV and EP are significantly positively related. The results (SB=0.780; T= 4.431, P<0.05) show that there is a significant positive relationship between BV and EP. Hypothesis two is accepted. **H3=** Hypothesis three proposes that EV and EP are significantly positively related. The results (SB=0.372; T= 5.765, P<0.05) show that there is a significant positive relationship between EV and EP. Hypothesis three is accepted. **H4=** Hypothesis two proposes that NEP and AC are significantly positively related. The results (SB=0.352; T= 7.038, P<0.05) show that there is a significant positive relationship between NEP and AC. Hypothesis four is accepted. **H5=** Hypothesis two

proposes that AC and AR are significantly positively related. The results (SB=0.376; T= 7.021, P<0.05) show that there is a significant positive relationship between AC and AR. Hypothesis five is accepted. **H6=** Hypothesis two proposes that AR and PN are significantly positively related. The results (SB=0.359; T= 7.038, P<0.05) show that there is a significant positive relationship between AR and PN. Hypothesis six is accepted. **H7=** Hypothesis two proposes that PN and EPB are significantly positively related. The results (SB=0.567; T= 5.062, P<0.05) show that there is a significant positive relationship between PN and EPB. Hypothesis seven is accepted. **H8=** Hypothesis two proposes that AP and EPB are significantly positively related. The results (SB=0.678; T= 7.031, P<0.05) show that there is a significant positive relationship between AP and EPB. Hypothesis eight is accepted. Finally, **H9=** Hypothesis two proposes that SN and EPB are significantly positively related. The results (SB=0.758; T= 4.258, P<0.05) show that there is a significant positive relationship between SN and EPB. Hypothesis nine is accepted.

Table 5.11: Path coefficient and T-statistics

Hypothesis	Standard Beta	T-statistics	VAF	Decision
EO→MO→P	0.638	5.744	27%	Accepted

Sig @ 5% *NOTE: Performance (P), entrepreneurial orientation (EO) and market orientation (ED)

The above table shows the T-statistics, path coefficient and VAF of the mediating relationship between entrepreneurial orientation (EO), market orientation (MO) and performance (P). **H4=**Hypothesis four proposes that market orientation (MO) mediates the relationship between entrepreneurial orientation (EO) and performance (P) and the results show that MO partially mediates the relationship between EO and P. The results (SB= 0.638; T=5.744, P<0.05 and VAF=27%) show that MO mediates the relationship between EO and P. Hypothesis four is accepted.

5.7 MEDIATION ANALYSIS

According to Hair et al. (2018), mediation analysis is a statistical test used to determine if a mediator variable plays a significant role in transmitting the effect of an

independent variable to a dependent variable. Similarly, Liengard et al. (2021) describe mediation testing as a method to assess the indirect influence of an independent variable on a dependent variable through a mediator variable. In this research paper, the mediation test was conducted using the PLS approach and involved bootstrapping with 5000 re-samples to test formulated hypotheses. The results of the mediation analysis are presented in the table below.

Table 5.12: Mediation results

Direct effect from @ (SN)		Indirect effect (mediation) @ PN		Total effects to @ (EPB)					
Coefficient	P-value	Coefficient	P-value	Coefficient	SD	T-value	VAF	P-value	SN (2.6%;98.5%)
0.738	0.000	0.561	0.000	0.691	0.735	5.623	28%	0.000	0.601;0.703

Sig @ 5% *NOTE: Social Norms (SN), Employee pro-environmental behaviour (EPB) and Social norms (SN).

From the above table, the mediation analysis was performed to assess the mediating role of personal norms (**PN**) on the linkage between social norms (**SN**) and employee pro-environmental behaviour (**PEPB**) of small hospitality firms. The above results revealed that the direct effect was significant (Beta=0.738 and $P<0.05$). The indirect effect became significant (Beta= 0. 0.561 and $P<0.05$). The total effect of PN on EPB through SN was found significant (Beta: 0.691; T= 5.623; $P<0.05$ and VAF=28%). This shows that the relationship between SN and EPB is partially mediated by PN. The bias-corrected confidence interval is 0.601;0.723 and since there is no zero in between this means that the mediation effect is significant. The next discussion is based on moderation analysis.

5.12 MODERATION RESULTS

According to Pulka et al. (2019), moderation analysis is a statistical test used to determine if a moderator variable significantly influences the relationship between an independent variable and a dependent variable. Similarly, Hair (2019) describes moderation testing as a method to assess the direct impact of a moderating variable on the relationship between an independent variable and a dependent variable. In this

research paper, the moderation test was conducted using the PLS approach, which involves bootstrapping with 5000 re-samples to test formulated hypotheses. The results of the moderation analysis are presented in the table below, illustrating the effect of the moderating variable on the relationship between the independent and dependent variables.

Table 5.13: Moderation analysis

Total effect (AP→PN)		Direct effects (AP*PN→EPB)				
Coefficient	P-value	Coefficient	SD	T-value	P-value	PN (2.5%; 97.5%)
0.752	0.000	0.532	0.096	7.236	0.000	0.487;0.632

Sig @ 5% *NOTE: Ascription of responsibility (AR) Personal Norm (PN) and Employee pro-environmental behaviour (EPB)

From the above table, the moderation analysis was performed to assess the moderating role of anticipated pride (**AP**) by small hospitality employees on the linkage between personal norms (**PN**) and employee pro-environmental behaviour (**EPB**) of small hospitality firms. The above results revealed that the total effect of AR on PN was significant (Beta=0.752; T=7.236; P<0.05). With the inclusion of the moderating variable AP, the impact of PN on EPB became significant (Beta= 0.751; T=9,286; P<0.05). The results show an average weight on the slop plot and the relationship between PN and EPB is moderated by AP. The bias-corrected confidence interval is 0.487;0.632, since there is no zero in between this means that the direct effect is significant. The discussion above presents the findings of the moderation analysis. The next will be based on table hypothesis.

5.7. RESEARCH HYPOTHESES

Table 5.20: Research Hypotheses

	Hypothesis	Results
H1	Altruistic values are significantly positively related to new ecological paradigm	Accepted

H2	Biospheric values are significantly positively related to new ecological paradigm	Accepted
H3	Egoistic values are significantly positively related to new ecological paradigm	Accepted
H4	New ecological paradigm is significantly positively related to awareness of consequences	Accepted
H5	Awareness of consequences is significantly positively related to ascription of responsibility.	Accepted
H6	Ascription of responsibility is significantly positively related to personal norm.	Accepted
H7	Personal norm is significantly positively related to employee pro-environmental behaviour.	Accepted
H8	Anticipated pride moderates the relationship between personal norm and employee pro-environmental behaviour.	Accepted
H9	The relationship between social norms and employee pro-environmental behaviour is mediated by personal norms.	Accepted

5.7 SUMMARY

This chapter covered the analysis of data using SmartPLS version 4.0, testing the hypotheses and disclosing the results. The first section covered the study's response rate; this outlined the number of participants who participated in this research. The second section covered the demographic profile of the research, which showed the frequency and percentage of the participant's gender, age, level of education, number of employees, years of operation, and position. The third section covered descriptive statistics, which outlined excess kurtosis and skewness. Section four focused on SEM, which evaluated the measurement model as well as the structural model. The reliability and validity of the research variables measurement model assessed the reliability and validity of the research constructs, whereas the structural model assessed the association amongst constructs. The findings indicate satisfactory reliability and validity of the construct of the study. A structural model was analysed using common method bias, R² squared, path coefficients and T-statistics, goodness of fit test, predictive relevance of model, the effect size and estimated model fit. All structural model analysis provided with satisfactory results as per required by each test requirement. The next chapter presents a summary of the results, conclusions reached and recommendations for future research.

CHAPTER SIX

CONCLUSIONS, AND RECOMMENDATIONS

6.1 INTRODUCTION

The preceding chapter covered the analysis of data, interpretations, and findings. In this chapter, the researcher summarises the study on the factors leading to pro-environmental behaviour among the employees of small hotels in the Capricorn and Waterberg district municipalities of Limpopo Province. This chapter includes a discussion of the study's research objectives, hypotheses, and issues, as well as an analysis of each construct used in the research. The author provides conclusions and recommendations based on the findings, including suggestions with the aim of encouraging small hotel owners, managers, and employees to adopt environmentally friendly practices. The chapter also acknowledges the study's limitations and suggests areas for future research.

6.2. OBJECTIVES

The objectives of this study were:

- To investigate the relationship between values (altruistic values, Biospheric values, and egoistic values) and the new ecological paradigm.
- To determine the relationship between the new ecological paradigm and awareness of consequences.
- To examine the relationship between an awareness of consequences and an ascription of responsibility.
- To determine the relationship between an ascription of responsibility and personal norms.
- To examine the relationship between personal norms and employee pro-environmental behaviour.
- To determine if anticipated pride moderates the relationship between personal norms and employee pro-environmental behaviour.

- To investigate if personal norms, mediate the relationship between social norms and pro-environmental behaviour.

6.3. HYPOTHESES

To gather enough information and explore this research, the researcher endeavoured to address the following hypotheses:

H1: Altruistic values are significantly positively related to the new ecological paradigm.

H2: Biospheric values are significantly positively related to the new ecological paradigm.

H3: Egoistic values are significantly positively related to the new ecological paradigm.

H4: The new ecological paradigm is significantly positively related to an awareness of consequences.

H5: An awareness of consequences is significantly positively related to ascription of responsibility.

H6: Ascription of responsibility is significantly positively related to personal norm.

H7: Personal norm is significantly positively related to employee pro-environmental behaviour.

H8: Anticipated pride moderates the relationship between personal norm and employee pro-environmental behaviour.

H9: The relationship between social norms and employee pro-environmental behaviour is mediated by personal norms.

6.4 CONCLUSIONS

6.4.1 Conclusion on demographic characteristics

The research study concludes that females dominate the small hotels industry, with many employees between the ages of 31 and 40. Majority of the SMME hotel employees have been working in the industry for more than 10 years, and therefore

they have experience. Furthermore, this study also indicated that the majority of SMME hotels and lodges have between 51 to 250 employees. These findings show that SMMEs employ workers according to the “National Small Enterprise Act 1996 (Act no 102 of 1996”) definition of SMMEs that was amended and is detailed in Table 2.6 of Chapter 2.

6.4.2 Conclusion on the relationship between values (altruistic, egoistic and biospheric values) and the new ecological paradigm)

The study concludes that there is a relationship between values and the new ecological paradigm. This study revealed that there is a significant relationship between values (altruistic values, egoistic values, and biospheric values) and performance and these findings are consistent with a number of studies conducted previously. Empirical evidence shows that individuals who prioritise altruistic values and biospheric values are more likely to hold pro-environmental beliefs and engage in behaviours that support sustainability and conservation. This was pointed out by a study by Chua, Quoquab, Mohammad & Basiruddin (2018), where they explored the mediating role of new ecological paradigm between value orientations and pro-environmental personal norm in the agricultural context in Asia. The results uncovered that, altruistic values positively and significantly affect NEP.

Furthermore, Jaini, Quoquab, Mohammad and Hussin (2020) support this relationship in their study titled “I buy green products, do you...?": The moderating effect of eWOM on green purchase behaviour in Malaysian cosmetics industry”, where the factors that affect green purchase behaviour in the context of cosmetics products purchase were investigated and the moderating role of electronic word-of-mouth (eWOM) in influencing such green behaviour was examined. The results revealed that altruistic values positively affect NEP. Despite the differences in focus and context, both studies suggest that altruistic values play a significant role in promoting pro-environmental behaviours and personal norms, and that the NEP mediates this relationship. These findings are consistent with previous research that has found a positive relationship between altruistic values and pro-environmental behaviours.

On the other hand, egoistic values have been found to be negatively linked to pro-environmental behaviours. Gansser, and Reich (2023), analysed the importance of the new ecological paradigm (NEP) and environmental concerns (EC) as factors influencing attitudes toward sustainable behaviour in the context of the theory of planned behaviour (TPB). The aim of the study was to investigate the connection between attitude toward sustainable behaviour in relation to the environment and climate and the intention to change the behaviour regarding nature and environmental protection. Egoistic environmental concerns were found to play the greatest impact on attitude toward NEP. The results also showed that the egoistic view has the strongest influence on attitudes toward sustainable behaviour related to the environment and climate.

In addition, Jaini, Quoquab, Mohammad and Hussin (2020) conducted a study on the antecedents of green purchase behaviour of cosmetics products. The objective of this study was to examine the effect of altruistic and hedonic values and the mediating effect of personal norm and pro-environmental belief toward green purchase behaviour. This study revealed that egoistic values positively affect NEP, which eventually affects consumers' personal norms.

The new ecological paradigm emphasises the interconnectedness of all living things and the need for sustainability and conservation and is positively linked to biospheric values and altruistic values. In support of this, Gansser and Reich (2023) analysed the importance of the new ecological paradigm (NEP) and environmental concerns (EC) as factors influencing attitudes toward sustainable behaviour in the context of the Theory of Planned Behaviour (TPB). The results also showed that the egoistic view has the strongest influence on attitudes toward sustainable behaviour related to the environment and climate.

Additionally, Suama, Wayan, Nadiroh and Neolaka (2019) conducted research to find out whether the knowledge about ecology, biospheric and egoistic values have a direct effect toward NEP students. The study then found that egoistic values have a negative effect on NEP. Furthermore, Jaini, Quoquab, Mohammad and Hussin (2020)

conducted a study on the antecedents of green purchase behaviour of cosmetics products, and the study revealed that egoistic values positively affect NEP, which eventually affects consumers' personal norms.

6.4.3 Conclusion on the relationship between new ecological paradigm and awareness of consequences

The study consistently demonstrated a positive correlation between the NEP and awareness of consequences. Empirical evidence highlights that individuals who hold a NEP are more likely to demonstrate increased awareness of environmental consequences and to engage in pro-environmental behaviour (Asif, Nadeem & Ahsan 2023). This suggests that the NEP serves as an essential factor in shaping individuals' attitudes towards the environment along with the awareness of the impact their behaviour has on the ecosystem.

6.4.4 Conclusion on the relationship between awareness of consequences and ascription of responsibility

The study concludes by indicating that the relationship between awareness of consequences and ascription of responsibility is an important predictor of pro-environmental behaviour. Empirical evidence found that individuals who exhibit greater awareness of environmental consequences and ascribe greater responsibility to themselves for their actions are more likely to engage in sustainability behaviours (Ghazali et al., 2019). This implies that individuals who understand the impact of their actions on the environment and take responsibility are more likely to make pro-environmental choices.

In summary, promoting awareness of consequences and ascription of responsibility are important initiatives for promoting sustainable behaviour and environmental consciousness. The findings emphasise the importance of fostering a sense of responsibility and understanding the interdependence between individuals and the environment to create a culture of sustainability.

6.4.5 Conclusion on the relationship between personal norm and employee pro-environmental behaviour

This research concludes that there is a significant relationship between personal norm and employee pro-environmental behaviour. This relationship is significant in promoting sustainable behaviour in the workplace. It was indicated by the empirical literature that, employees who hold strong personal norms for environmentally responsible behaviour are more likely to engage in pro-environmental behaviour (Sörqvist, & Langeborg, 2019). Thus, there is a need to encourage and promote strong personal norms among employees by organisations. Encouraging and promoting personal norms for environmentally responsible behaviour among employees will have positive impacts both for the organisation and the environment.

6.4.6 Conclusion of the relationship between personal norm and employee pro-environmental behaviour when anticipated pride is a moderator

This research concludes that, the relationship between personal norm and employee pro-environmental behaviour is strengthened when anticipated pride moderates the relationship. According to the empirical literature, it is evident that anticipated pride is an important motivator for employees to engage in pro-environmental behaviour when they hold strong personal norms for environmentally responsible behaviour (Ghazali, Nguyen, Mutum & Yap, 2019). The study further concludes that strong personal norms, and anticipated pride, are key factors in promoting pro-environmental behaviour and sustainability in the workplace (Elert et al., 2019).

6.4.7 Conclusion of the relationship between social norms and employee pro-environmental behaviour when personal norm is a mediator

This research concludes that, the relationship between social norms and employee pro-environmental behaviour is positively significant when personal norm mediates the relationship. The empirical literature by De Groot (2020) and Han (2022), demonstrated that social norms influence employee pro-environmental behaviour by shaping their beliefs and attitudes towards environmental issues. Furthermore, personal norm plays a mediating role in the relationship between social norms and pro-environmental behaviour (Shipley et al., 2023). The findings highlight the importance of creating a work environment that promotes pro-environmental social

norms and personal norms among employees. Incorporating both personal norms and social norms into organisational initiatives is crucial to drive pro-environmental behaviour among employees and promote sustainability in the workplace.

6. 5. RECOMMENDATIONS

6.5.1 Recommendations for SMME owners/managers

6.5.1.1 Recommendations for altruistic values and new ecological paradigm

Regular workshops for SMME hotel staff from all divisions of the company are required to educate them on the value of preserving and protecting the environment. Green practice should also be included as a course in entrepreneurial programmes at higher education institutions so that these employees can take them as their subjects or modules, preparing them to protect the environment when running their day-to-day operations.

6.5.1.2 Recommendations for egoistic values and ecological paradigm

Employees at SMMEs need to be aware of the influence of organisational factors on green practice to gain a competitive advantage. They need to be fully aware of how organisational variables affect green practices and how crucial they are to improving the efficiency of SMME hotels. SMME hotel management must regularly educate themselves and every employee on green practices. To gain a competitive advantage, they must also increase their level of knowledge about green practices and acquire new skills to function more effectively. Additionally, SMME hotel managers must be able to educate both current employees and new hires on how organisational issues might influence green practices.

6.5.1.3 Recommendations for biospheric values and new ecological paradigm

SMME hotel staff are urged to focus on creating stronger relationships to achieve green practice and to focus on utilising their strong ties as people to boost performance. Additionally, it is advised that SMME hotel staff members organise workshops with other staff members. Both sides will profit from this. Hotel staff members should participate in workshops to improve their companies. Additionally, it is advised that SMME employees concentrate on individual characteristics, including

moral standards, response effectiveness, and environmental concern based on the many types of individual variables examined in this research.

6.5.1.4 Recommendations for new ecological paradigm and awareness of consequences

An employee's attitude toward the aim of green practice will depend on how concerned they are about the environment, or vice versa. As a result, it is advised that individuals consider the environment.

6.5.1.5 Recommendations for awareness of consequences and ascription of responsibility

To help employees understand the repercussions of their actions and accept responsibility for them, organisations might offer feedback and incentives. This can be accomplished by offering incentives, such as awards or recognition, for exhibiting pro-environmental behaviours and by giving staff feedback on their pro-environmental behaviours. Additionally, the association between perceived pro-environmental organisational atmosphere and pro-environmental conduct is mediated by personal norms. To encourage pro-environmental behaviour among employees, businesses should concentrate on promoting personal norms connected to being an environmentally conscious worker. By putting these suggestions into practice, businesses may help employees feel more accountable and aware of the effects of their actions on the environment, which will lead to a more sustainable workplace.

6.5.1.6 Recommendations for ascription of responsibility and personal norm

It has been demonstrated that knowledge of the effects and a belief of responsibility activate personal norm. With or without being preceded by intention, an active personal norm will cause behaviour to change. Nevertheless, various connections between these factors have been hypothesised, particularly those involving awareness of the consequences and ascription of responsibility. Some studies contend that personal norms should be driven solely by awareness of consequences, but others contend that personal norms will take effect when a consumer is both aware of the effects of their behaviour and feels accountable for it. Other elements, including denying responsibility, may also operate as moderators in the interaction between

these ideas. To use these ideas to encourage moral and ethical behaviour in people and organisations, further research is required to better understand the complicated interaction between ascription of responsibility and personal norms. Future studies might examine the moderating impact of additional factors on the relationship between these ideas as well as the function of individual norms in foretelling various sorts of behaviour, such as pro-environmental consumer behaviour or digital piracy.

6.5.1.7 Recommendations for personal norm and employee pro-environmental behaviour

An important predictor of pro-environmental behaviour in the workplace is personal norm. A personal norm can be activated by being aware of the effects and ascription of responsibility (Mouro & Duarte, 2021). Personal norms and pro-environmental behaviour might be influenced by organisational culture or injunctive norms. Therefore, it is crucial for businesses to foster an environment and culture that supports environmentally friendly behaviour. This can be accomplished by putting in place environmental policies and procedures that support sustainability and by giving staff members the tools and training they need to adopt environmentally friendly habits. Organisations can also use descriptive norms and social influence to promote pro-environmental behaviours among their workforces.

6.5.1.7 Recommendations for personal norm and employee pro-environmental behaviour when anticipated pride is the moderator

Other variables, such as anticipated pride, may moderate the relationship between personal norm and pro-environmental behaviour. When pro-environmental descriptive norms are more positive, pleasant emotions like pride can promote pro-environmental behaviour. Therefore, it is crucial for businesses to foster an environment and culture that supports environmentally friendly behaviour among staff members and fosters sense of pride. This can be done by creating and promoting sustainable environmental policies and procedures and by arming staff members with the tools and knowledge they need to practice pro-environmental behaviour. Organisations can also promote pro-environmental behaviours among their workforce by using descriptive norms and social influence. Future studies could look into the moderating effects of anticipated

pride on the relationship between personal norm and pro-environmental behaviour, as well as the efficacy of various interventions and strategies, like feedback mechanisms or incentives, in promoting pro-environmental behaviours among employees while considering the role of anticipated pride. Additionally, studies could investigate into how other emotions, such as guilt, affect pro-environmental behaviour engagement and how these emotions interact with personal norms and descriptive norms to predict pro-environmental conduct in the workplace. Therefore, it is advised that businesses foster an environment and culture that supports environmentally friendly behaviour among staff members and fosters positive feelings like pride, while also considering the moderating effect of anticipated pride. Organizations can also employ social influence and descriptive norms to encourage pro-environmental behaviours among employees.

6.5.1.8 Recommendations for social norms and employee pro-environmental behaviour when personal norm is the mediator.

The relationship between social norms and pro-environmental behaviour is mediated by personal norms. The majority of the direct and indirect effects of social norms on pro-environmental behaviour are moderated by personal norms, which are specifically the best predictor of pro-environmental behaviour. Businesses should foster an environment that supports employees' pro-environmental behaviour and encourages wholesome social values. This can be accomplished by putting in place environmental policies and procedures that support sustainability and by giving staff members the tools and training they need to adopt environmentally friendly habits. When a personal norm acts as a mediator, firms can better comprehend the connection between societal norms and employee pro-environmental behaviour. This knowledge can assist firms in creating treatments and tactics that are more effective at encouraging employees to practice pro-environmental behaviour.

6.6. STUDY LIMITATIONS

The link between VBN, social factors, anticipated pride, and employee pro-environmental behaviour has been adequately demonstrated by this research. The research was limited in its generalisability because it only included 370 hotel

employees in one province. This study used only convenience sampling, which raises the possibility of bias. The cross-sectional survey approach used in the study cannot be used to analyse behaviour over a longer time span. Additionally, the study was carried out in the Limpopo Province's Capricorn and Waterberg District Municipalities. The study excluded participation from other provinces and districts. As a result, the researcher is unable to draw any generalisations on the intention to adopt green practices across diverse districts. Results cannot be generalised to all SMME hotels of a comparable scale because they may vary across different nations, provinces, and districts.

6.7. SUGGESTIONS FOR FURTHER RESEARCH

Further research is needed to explore the antecedents of employee pro-environmental behaviour in small hotels. Studies have investigated the determinants of pro-environmental behaviour among hospitality employees, including employee motivation, environmental concern, self-efficacy, and green organisational climates. However, more research is needed to understand how these factors influence pro-environmental behaviour specifically in small hotels. Additionally, research could explore the effectiveness of different interventions and strategies, such as feedback mechanisms or incentives, in promoting pro-environmental behaviour among employees in small hotels. Furthermore, research could investigate the role of different perceptions of ethical and social responsibility faced by top and mid-level managers in promoting pro-environmental behaviour among employees in small hotels. By conducting research in these areas, small hotels can gain a better understanding of the antecedents of pro-environmental behaviour among employees and develop more effective interventions and strategies to promote sustainability in their operations.

6.8. SUMMARY

The research's limitations and prospective research fields were explored. The identified limitations include acquiring complete and useful information from SMME hotel owners and management. Some respondents were left out of this study since

they did not send back their filled-out questionnaires in the allotted time. Moreover, the study was limited to the districts of Capricorn and Waterberg in the province of Limpopo. Participation in the study was prohibited for other provinces and districts. This made it impossible for the researcher to draw more general conclusions on the intention to apply green practices in various contexts. Furthermore, recommendations were made to strengthen the bond between small hotel employees and environmentally friendly behaviour. Implementing sustainability-promoting environmental policies and procedures as well as giving employees the tools and training they need to practice pro-environmental behaviour were some of the recommendations made. When a personal norm acts as a mediator, organisations can better comprehend the connection between societal norms and employee pro-environmental behaviour. Another suggestion is to foster an environment and culture that supports environmentally friendly behaviour. This can be done by implementing sustainability-oriented environmental policies and practices and by giving employees the tools and training they need to practice environmentally friendly behaviour.

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ANEXTURE 1: ENGLISH QUESTIONNAIRE

My name is Dimakatjo Mmaratha Dorcus Mamabolo a student at the University of Limpopo. I am conducting a study on the determinants of pro-environmental behaviour of the employees of SMMEs in the Capricorn and Waterberg district, particularly the small hotels. Tourism (including hospitality) significantly contributes to sustainable development globally and in South Africa through job creation and poverty reduction. However also, tourism has a detrimental impact on the environment due to excessive consumption of natural resources, pollution, and solid and liquid waste. Positive changes in employees' behaviour towards pro-environmental actions are highly necessary to manage environmental challenges and achieve sustainable tourism and hospitality. This questionnaire is for only academic purposes and confidentiality will be strongly maintained. As a respondent, you are not duty-bound to disclose your name. I am humbly requesting you to assist me by answering the following set of questions which will only require twenty minutes of your time.

Request: Please answer by marking (X) in the correct box.

SECTION A: DEMOGRAPHIC PROFILE

1. Gender of the respondent

Male	Female
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2. Age of the respondent

20 years and below	21-30 years	31-40 years	41-50 years	51- 60 years	Above 60 years
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3. Level of education of the respondent

Below Matric	Matric	Diploma/degree	Honours	Masters	Doctoral
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4. How long have you been working in this business?

0-1 year	2-5 years	6-10 years	11-15years	16 years and above
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5. Your position in the firm

Reservation and marketing	Human Resource	Finance	Food and Beverage	House Keeping	Maintenance	General Management	other
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SECTION B: ALTRUISTIC VALUES

Statement	Not important	Slightly Important	Moderately important	Important	Very Important
It is important to have equality(equal opportunity for all)					
It is important to have a world at peace (free of war and conflict),					
it is important to be helpful(working for the welfare of others)					

SECTION C: BIOSPHERIC VALUES

Statement	Not important	Slightly important	Moderately important	Important	Very important
it is important to prevent pollution and conserve natural resources					
it is important to respect the earth(harmony with other species)					
it is important to have unity with nature(fitting into nature)					
it is important to protect the environment (preserving nature),					

SECTION D: EGOISTIC VALUES

Statement	Not important	Slightly important	Moderately important	Important	Very important
It is important to be influential (having an impact on people and events)					
It is important to have social power(control over other, dominance),					
I think it is important to have authority (the right to lead or command)					
it is important to have wealth (material positions, money)					

SECTION E: NEW ENVIRONMENTAL PARADIGM

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
In recent times, the human population has grown at a faster rate than the planet can support					
The earth has limited resources and space					

7Plants and animals have the same right to life as human beings.					
The balance of nature is very fragile and easily disrupted.					
Most environmental problems can be solved through the application of more and better technology.					
Environmental degradation is not as bad as people normally say it is.					
If things continue on the current path, we will soon experience a major natural disaster.					

SECTION F: AWARENESS OF CONSEQUENCES

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I am aware of the consequences of protecting the environment					
I am aware of the consequences of not protecting the environment					
My actions have potential consequences to the welfare of others during the decision-making process.					

I am aware and I understand the fragility of our environment and the importance of its protection					
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SECTION G: ASCRIPTION OF RESPONSIBILITY

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I feel greatly responsible for the environmental problems that the world faces					
I feel greatly responsible for global warming and climate change					
I feel greatly responsible for the exhaustion of energy sources					

SECTION H: PERSONAL NORM

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I have a moral obligation to protect the environment					
I feel that I should protect the environment					
I feel that it is important that people in general protect the environment					
I feel that I should do what I can to					

conserve natural resources					
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SECTION I: SOCIAL NORMS

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
My friends expect me to engage in pro-environmental behaviour at work					
My family expect me to engage in pro-environmental behaviour at work					
My co-workers expect me to engage in pro-environmental behaviour at work					

SECTION J: Anticipated pride

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Making good environmental decision will make me proud					
I will feel proud when my good environmental behaviour is recognised					
The expected feeling of pride motivates me to practice green behaviour					
I practice pro-environmental behaviour because					

it gives me sense of pride to preserve the environment					
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SECTION K: EMPLOYEE PRO- ENVIRONMENTAL

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I voluntarily carry out environmental actions and initiatives in daily work activities					
I recycle at work when it is possible					
At work, I make sure that I conserve the amount of materials that I use					
At work, I turn off work-related equipment when they are not in use					
I always make sure that I reduce the amount of energy that I use at work					
I undertake environmental actions that contribute positively to the image of our hotel					
I encourage my colleagues to adopt more environmentally conscious behaviour					

THANK YOU
END OF QUESTIONNAIRE



ANNEXURE 1: SEPEDI POTŠIŠONYAKIŠIŠO

Leina laka ke nna Dimakatjo Mmaratha Dorcus Mmabolo ke ithutela Masetase wa tša kgwebo le Unibesiti ya Limpopo. Ke diragatša di nyakišišo ka di kgwebo tše nnyane le tša magareng mebasepala eo e kgethilwego ka porofense ya Limpopo. Ke kgopela gore le nthuše go tlatša potšišonyakišišo ye. Potšišonyakišišo ye etla bereka feela gotša sekolo. Yona etla tšea fela metsotso eme hlano gomme nka thabela perekišano mmogo ya lena.

Kgopelo: Araba ka go thala sefapano goba khross (x) go lepokisana leo le nago le Karabo ya maleba go ya ka wena/lena.

KAROLO A: Phorofaele ya tša botho

1. Bong

Monna	Mosadi
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2. Legoro la tša bogolo

Ka tlase ga mengwaga ye 20	20-30	31-40	41-50	Go feta mengwaga ye 50
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3. Tša dithuto

Ka tlase ga marematlou	Marematlou	Dipoloma/degree	Onase	Masetase	Doctoral
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4. Ke mengwaga e mekae o šoma kgwebong yeo ya lena?

0-1	2-5	6-10	11-15	16 le go feta
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5. O šoma ka lefapheng le lefe ka mo kgwebong?*

Tša dipeyeletšo le dithekišo	Methopo ya batho	Tšamatlotlo o le ditšhelete	Dijo le dino	Go hlokomela diphaphuši	Go lokiša	Bolaodi kakaretšo	Tše dingwe
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KAROLO B: DITEKANO TŠA BOPHELO

Setatamente	Ga go bohlokwa	Go bohlokwa ga nnyane	Go bohlokwa bja magareng	Go bohlokwa	Go bohlokwa kudu
Go bohlokwa go ba le tekatekano (menyetla ya go lekana go batho ka moka)					
Go bohlokwa go ba le lefase la khutšo (la go hloka dintwa le di phapano)					

Go bohlokwa go aba thušo (go šomela lephelo le le botse la batho ba bangwe)					
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KAROLO YA C: TŠA LEFASE LE BOPHELO BA LEFASENG

Setatamente	Ga go bohlokwa	Go bohlokwa ga nnyane	Go bohlokwa bja magareng	Go bohlokwa	Go bohlokwa kudu
Go bohlokwa go thibela tšhilafalo le go boloka tlhago					
Go bohlokwa go tlhompha tikologo (kwano le diphidi txe dingwe txa lefaseng)					
Go bohlokwa goba le botee le tlhago (go itokela ka gare ga tlhago)					
Go botlhokwa go šireletša naga (go boloka tlhago)					

KAROLO YA D: TŠEO DI KGOTSOFATŠAGO MOTHO KA NOŠI

Setatamente	Ga go bohlokwa	Go bohlokwa ga nnyane	Go bohlokwa bja magareng	Go bohlokwa	Go bohlokwa kudu
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Go bohlokwa go ba le khuetsō go batho ba bangwe (go ba le khuetsō ditiragalong tša batho ba bangwe)					
Go bohlokwa go ba le maatla a selegae (go kgona go laola batho ba bangwe le tomineišene)					
Ke nagana gore go bohlokwa go ba le maatla a go laola (tokelo ya go eta pele goba go fa ditaello)					
Go bohlokwa go ba le lehumo (dithuto, mašeleng)					

KAROLO YA E : PAHARADAEME YE NTSWHA YA TIKOLOGO

Setatamente	Aowaowa	Aowa	Ga ke na bonnete	Nnete	Nnete Nnete
Kgolo ya palo ya batho oketšegile go feta ka fao lefase le kgonago go ba thekga					
Tlo					
Dimela le di phoofolo di na le ditokelo tša bophelo tše di swanago le tša batho					

Tlhago e a tekateka ebile e amega gampe ga bonolo					
Bontšhi bja mathata a naga bo ka rarollwa ka mokgwa wa go šomiša mabokgoni ao a kaonafaditswego a tša mahlale					
Go hwelela ga naga ga se go go mpe ka tsela yeo batho ba go bolelago gore ke go go mpe ka gona					
Ge batho ba ka tšwelapele go phela ka tsela yeo ba phelago ka gona, gose goye kae re tlo itemogela hlakahlakano ya tša tlhago.					

KAROLO YA F: TEMOGO YA DITLAMORAGO

Setatamente	Aowaowa	Aowa	Ga ke na bonnete	Nnete	Nnete nnete
Ke lemoga ditlamorago tša go šireletša naga					
Ke lemoga ditlamorago tša go se šireletši naga					
Mediro yaka e na le ditlamorago tšeo di ka amago batho ba bangwe ge go tšewa dikgetho.					
Ke lemoga le go kwišiša bonolo bja naga ya rena le					

bohlokwa bja go e šireletša					
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KAROLO YA G: BOITHWEŠO BJA MAIKARABELO

Setatamente	Aowaowa	Aowa	Ga ke na bonnete	Nnete	Nnete
Ke ikwa ke rwele maikarabelo kudu go di tlotlo tšeo naga e lebanego le tšona					
Ke ikwa ke rwele maikarabelo kudu go phetogo ya boso lego fiša ga lefase					
Ke ikwa ke rwele maikarabelo ge go fela ga didirišwa tša maatla/enetši, tša tlhago					

SECTION H: DITLWAEDI TŠA SETHO/BOTHO

Setatamente	Aowaowa	Aowa	Ga ke na bonnete	Nnete	Nnete Nnete
Ke gapeletšega go šireletša naga ka lebaka la gore, ke setlwaedi sa go laetša setho/botho					
Ke ikwa ke swanetši go šireletša naga					
Kena le maikutlo a gore, go bohlokwa gore batho ka kakaretšo ba swanetši go šireletša naga					
Ke ikwa ke swanetši godira ka fao nka kgonago gore ke					

boloke didirišwa tša tlhago					
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SECTION I: DITLWAEDI TŠA SELEAGO

Setatameme	Aowaowa	Aowa	Ga ke na bonnete	Nnete	Nnete Nnete	
Bagwera baka ba letela gore ke tšeye karolo maitshwarong a go boloka tikologo e re le moshomong						
Ba lapa laka ba tlhohletša gore ke tšeye karolo maitshwarong a go boloka naga ge re le moshomong						
Bašumi mmogo ka nna ba letela gore ke tšeye karolo maitshwarong a go boloka naga ge re le mošomong						

KAROLO YA J: KAKANYO YA BOIKGANTŠHO

Setatameme	Aowaowa	Aowa	Ga ke na bonnete	Nnete	Nnete
Go tšeya dikgetho tša maleba tša go šireletša naga go itira gore ke be yo a ikgantšhago					
Ke tla ikwa ke ikgantšha ge maitshwaro a ka a go širiletsa a lemogwa					
Maikotlo ao a lebeletswego a					

boikgantšho a ntlhohleletša gore ke tsweletse maitshwaro a go boloka naga					
Maitshwaro a ka ke a go boloka naga ka lebaka la gore, seo se mpha maikutlo a boikgantšho					

**KAROLO YA K: MAITSHWARO A MABOTSE A GO ŠIRELE TSA
NAGA YA MOŠOMI**

Setatamente	Aowaowa	Aowa	Ga ke na bonnete	Nnete	Nnete Nnete
Ke tšea karolo ka goikgafa medirong ya tikologo le maitekong medirong ya letšatši le letšatši ya mošomo					
Mo mošomong waka ke šomiša dilo lefša ge go kgonagala					
Ke netefatša gore ke šomiša didirišwa ka hlokomelo ge ke le mošomong					
Ge ke le mošomong ke tima didiřwa tšeo di sa berekiřwego ka nako yeo					
Ke dula ke netefatša gore ke fokotša bontšhi bja mohlagase woo ke o šomiřago ge ke le mošomong					
Ketšea dikgato tša go ama naga tšeo di fago hotele					

seswantšho se se botse					
Ke hlohleletša bašumi mmogo ka nna gore ba laetše maitshwaro a go boloka naga					

KE A LEBOGA
MAFELELO A POTŠIŠONYAKIŠIŠO

ANNEXURE 2: CONSENT FORM

Research title “Antecedents of employee pro-environmental behaviour in hospitality firms in the capricorn and waterberg district municipalities, limpopo province”.

Researcher: Dimakatjo Mmaratha Dorcus Mamanbolo

I. _____ hereby voluntarily agree to participate in the following project: Entrepreneurial orientation and the performance of SMMEs in selected municipalities of Limpopo province: the role of market orientation and environmental dynamism.

I understand that:

1. My responses will be treated with confidentiality and only be used for the purpose of the research.
2. No harm will be posed to me.
3. The research project aim has been explained to me.
4. I do not have to respond to any question that I do not wish to answer for any reason.
5. Access to the records that pertain to my participation in the study will be restricted to persons directly involved in the research.
6. Any questions that I may have regarding the research, or related matters, will be answered by the researcher.
7. Participation in this research is entirely voluntary and I can withdraw my participation at any stage.
8. I understood the information regarding my participation in the study and I agree to participate.

Signature of interviewee

Signature of interviewer

Signature of witness

Signed at _____ on this ____ day of _____ 20____

ANNEXURE 3: EDITORIAL LETTER



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640 Munnik Avenue, Bendor, Polokwane, 0699

Registration No. 2023/162786/07

moffatsebola@gmail.com, 0697110718

DATE: 26 July 2024

Re: Certificate of Editing

I hereby advise that I edited a dissertation titled: **"Antecedents of Employee Pro-Environmental Behaviour in Hospitality Forms in the Capricorn and Waterberg District Municipalities, Limpopo Province"** by **Dimakatjo Mmaratha Dorcus Mamabolo**. My editorial interventions entailed the following:

- English academic language editing, including grammar, spelling, tenses and subject/verb agreement. Efforts were made to ensure that UK English instead of US English was used consistently in the text. Therefore, verbs such as "organize", "emphasize", "realize" and "behavior" were spelled thus, "organise", "emphasise", "realise" and "behaviour", respectively.
- Style and full reference editing according to the Institution's style guide. Here, I checked consistency in the formatting of in-text references and the list of references, including

checking that all the sources cited in text were duly acknowledged and that all the sources on the list of references appeared in the text. Addressing inconsistencies in the use of font types and sizes throughout the document.

Please note that I have not had sight of the manuscript since editing, with Dimakatjo either accepting or rejecting suggested changes or corrections, as is usual. Unless tampered with prior to your reception of the edited work, I trust you will find the editing quality in order.

Regards

Dr Moffat Sebola,



ANNEXURE 4: SIMILARITY RESULTS

ANTECEDENTS OF EMPLOYEE PRO-ENVIRONMENTAL BEHAVIOUR IN HOSPITALITY FIRMS IN THE CAPRICORN AND WATERBERG DISTRICT MUNICIPALITIES, LIMPOPO PROVINCE

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